Vol. 6, Part 12.* 15th December, 1937.

IMP. INST. ENT. LIBRARY
15 DEC 1937
En. 344 B

THE

PROCEEDINGS

OF THE

ROYAL ENTOMOLOGICAL SOCIETY

OF

LONDON

Series B.

TAXONOMY

(being the continuation of Stylops)

LONDON:

PUBLISHED BY THE SOCIETY AND

SOLD AT ITS ROOMS, 41, QUEEN'S GATE, S.W.7

Price 3s. 0d.

* *With title page, contents and index.*

NOTICE.

The Proceedings of the Royal Entomological Society of London are issued in three series.

Series A. General Entomology.
Series B. Taxonomy.
Series C. Journal of Meetings.

Series A. and B. are each issued in parts in an annual volume of approximately 240 pages.

Papers submitted for publication in either of these series by authors who are not Fellows of the Society may be accepted if they are communicated by a Fellow. Preference will be given to papers written in the English language, and papers of more than 8 printed pages will not normally be accepted for publication in these journals.

Whilst the Society is prepared to undertake the provision of a reasonable number of text-figures, authors are expected to supply the original drawings for such figures, and in the case of plates, half-tone, or colour-work the author is required to pay for the necessary blocks.

A uniform method is adopted for the citation of bibliographical references in the Society's publications as follows :—

Smith, A., 1936, *Proc. R. ent. Soc. Lond.* (*B*) **6** : 301-306, pl. 1.

——. 1936, *Trans. R. ent. Soc. Lond.* **84** : 901-936.

Titles of periodicals cited are to be abbreviated in the manner indicated in the *World List of Scientific Periodicals, 2nd edition* 1934.

Authors are entitled to receive 25 copies of their papers free of charge and may purchase additional copies provided that request be made before publication.

Papers offered for publication should be sent to the Secretary, Royal Entomological Society of London, at 41, *Queen's Gate, London, S.W.*7, and must be typewritten on one side of the paper only.

Series C. is issued prior to every General Meeting. It contains abstracts of exhibits to be shown and communications to be made together with the titles of papers accepted for publication.

The annual subscription to *Series A. General Entomology* is £1 4*s.* 0*d.*; *Series B. Taxonomy*, £1 4*s.* 0*d.* (single parts 3*s.* 0*d.*); and *Series C. Journal of Meetings*, 6*s.* 0*d.*

As from January 1936 the journal *Stylops* is continued as *Proceedings, Series B. Taxonomy.* Copies of volumes 1 to 4 are available at £1 16*s.* 0*d.* each, post free.

THE ACRIDIDAE (ORTHOPTERA) OF MT. KENYA, EAST AFRICA

By H. B. Johnston, M.A., F.R.E.S., F.Z.S.

In spite of the increased attention which has of late been given to the insect fauna of the higher mountains of Africa, it is certain that our knowledge is very imperfect. This is true particularly of the Orthoptera. A small, though welcome, addition to our knowledge of the subject is provided by a collection of Acrididae recently made by Mr. G. L. R. Hancock, of the Government Education Department, Uganda, during an ascent of Mt. Kenya in May 1935. Though only ten species were collected, five of these have proved to be new, including one new subspecies.

The material in the collection was taken on the north-west face of the mountain and from three types of habitat, namely: upland grasslands at about 8000 feet, a narrow belt of Podocarpus–Juniper forest at about 9000 feet and the " Alpine grasslands " at 10,000 to 12,000 feet.

An examination of the literature has shown how few previous records exist from Mt. Kenya. These have been included in the following list, which is believed to comprise all the Acrididae known to date from this locality.

One other, *Gymnobothroides keniensis* sp. n., has been described from another collection.

Thanks are due to Mr. Hancock for submitting the collection. I desire also gratefully to acknowledge the generous assistance and advice of Dr. B. P. Uvarov.

Types of the species described are deposited in the British Museum.

Odontomelus pallidus Sjöstedt, Y.

Ark. Zool. 7 (38) : 16, Pl. 2, fig. 4.

Paracomacris centralis Rehn.

Forest, Juniper–Podocarpus zone. 2 ♀♀.

Paracomacris amplificata sp. n. (fig. 1).

♂ (type). Antennae long, slender, 3 basal joints very slightly expanded, brownish basally, darker in apical half, reaching hind margin of pronotum. *Frons* oblique, punctured all over, but more distinctly on frontal ridge above ocellus. Frontal ridge constricted at ocellus, above which it expands less than below. Excised only at and below ocellus, lateral carinae broad and obtuse. Vertex very prominent, horizontal. Margins of fastigium raised, broad and punctured. A central low carinula traversing vertex and occiput. *Pronotum* longer than broad. Lateral carinae straight and parallel in prozona, in metazona diverging and obsolescent. Main sulcus alone defined and cutting all three carinae. Disc in prozona smooth, in metazona closely punctate. Hind margin only slightly angular. Lateral lobes not deeper than long, lower margin broadly angular. Prozona rugulose; metazona, unlike the disc, coarsely and unevenly punctured. Mesosternal lobes separated by wide interspace. *Elytra* abbreviated, reaching somewhat beyond the base of hind femur, apex pointed. A black band in the discoidal area. *Supra-anal plate* pyriform, with a median longitudinal impression. Cerci straight, pointed and slightly longer than supra-anal plate. General colour chestnut. A sinuous black band traversing lateral lobes below the middle. Lower third cream coloured. Outer surface of hind femora suffused with black. Lower surface reddish. Knees black. A broad black lateral band on abdomen.

♀ (paratype). Larger. Antennae relatively shorter than in male. A yellowish line in discoidal area of elytron. The frontal sulcus less deeply excised.

Total length ♂ 14, ♀ 21; pronotum ♂ 3, ♀ 4; elytra ♂ 2·5, ♀ 5; hind femur ♂ 8·5, ♀ 13 mm.

2 ♂♂, 13 ♀♀, Juniper–Podocarpus zone, v.1935. *G. L. R. Hancock.*

This species takes its place with the other two brachypterous species of the genus, *P. elgonensis* Uv. and *P. abyssinicus* Uv. From these it is easily and sharply separable by its divergent pronotal carinae, by the shorter wings and shorter pronotum and by the shorter and rather thicker male cerci.

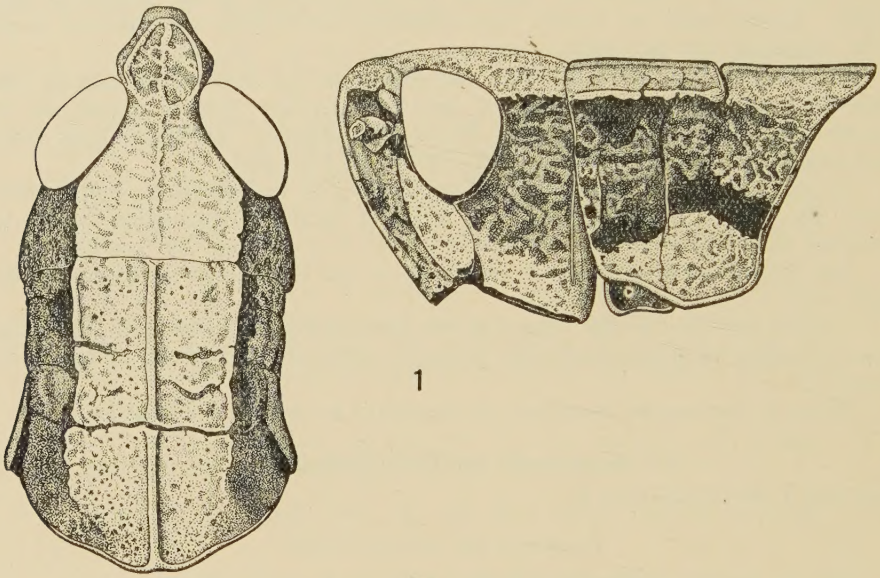


Fig. 1.—*Paracomacris amplificata* sp. n. ♀.

Paracomacris sp.

Forest Juniper–Podocarpus zone, 5 ♀♀.

These specimens differ from all the known species of this genus, and should probably form another new species. The lateral carinae of the pronotum are parallel as in *P. elgonensis* Uv. and *P. abyssinicus* Uv., but the pronotum is shorter and the lobes are shallower. The frontal characters also are totally different, especially those of the frontal ridge. In the absence, however, of males, it seems inadvisable to do more than record these specimens.

Gymnobothroides keniensis sp. n. (fig. 2).

♂ (type). Antennae very slightly expanded basally, somewhat longer than head and pronotum together, apical half coarsely punctured. *Frons* very oblique. Frontal sulcus deep, carinae continuous, sub-parallel from level of antennae and diverging very slightly downwards. Lateral facial carina sharp and sinuous. Vertex produced. Fastigium oblong, almost horizontal, sharply angular at junction with frons, concave with raised margins. *Pronotum* not compressed laterally, with three well-defined carinae, lateral converging slightly to about the middle of prozona, thereafter diverging very distinctly

through metazona. Elytra lobiform, not reaching further than base of hind femur; wings abortive. Cerci straight, obtusely pointed, slightly longer than supra-anal plate, which is bluntly rounded distally. Colour generally light brown with dark brown bands. Broad dull black band behind eye and extending downwards below the lower margin of eye. Pronotum: disc light brown, lobes with broad dark brown band extending downwards from under lateral carina to below middle, becoming lighter brown in the metazona. Lower half of lateral lobes ivory coloured. Elytra chestnut. Hind knees black, hind tibiae reddish-brown. A broad black stripe on each side of the abdomen.

Total length ♂ 12, ♀ 19; pronotum ♂ 2·5, ♀ 4; elytra ♂ 3, ♀ 3·5; hind femur ♂ 9, ♀ 11 mm.

1 ♂, 3 ♀♀, Mt. Kenya, viii–x.1927. *A. Insoll.*

This species resembles and has been compared with *G. hemipterus* Miller, of which the type is in the British Museum. From the latter it can be separated by the more prominent vertex, the structure of the frons and the more constricted pronotum with much more clearly defined carinae.

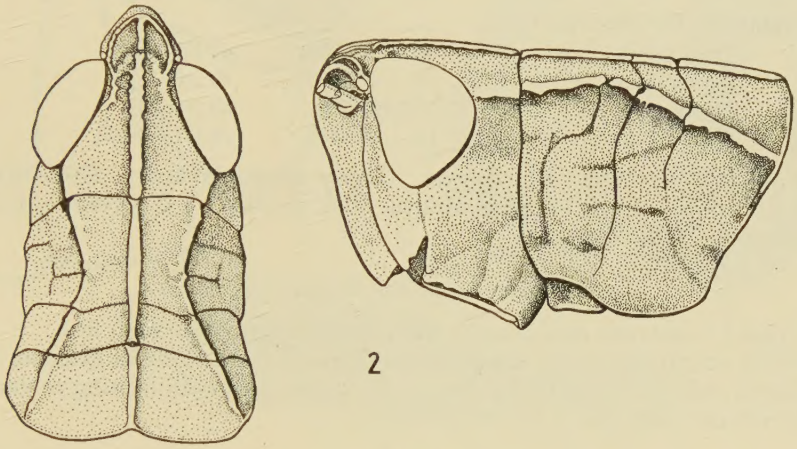


FIG. 2.—*Gymnobothroides keniensis* sp. n. ♀.

Aulacobothrus aethiopicus (I. Bol.).

1922. *Phorenula aethiopica* I. Bol., *Voy. Rothschild Ethiopie Afr. Orient. angl.*: 178.
1934. *Aulacobothrus aethiopicus* Uv., *J. linn. Soc. Zool.* **38**: 604.

Mt. Kenya, v.1935. *G. L. R. Hancock.* In open grassy places in Juniper–Podocarpus zone 1 ♀.

This species described from Abyssinia by Bolivar was again met with there by Dr. H. Scott in 1926 (Uvarov, 1934, *J. linn. Soc. Zool.* **38**: 604). The present specimen and a long series recently brought by me from the Imatong Mts., southern Sudan, further extend its range. The Mt. Kenya specimen corresponds with Bolivar's rather meagre description except in the colour of the hind tibiae, which are red.

Cosmorhyssa fasciata Thnb.

1912. Sjöstedt, Y. *Ark. Zool.* **7** (38): 17.

Gastrimargus acutangulus Stål.

This very striking species has hitherto been known only from S. Africa, with the exception of one record from Zanzibar by Saussure (*Prod. Oedip.* : 114).

A number of examples of what must be considered a new subspecies have been obtained in Kenya. These all differ from the species as known from South Africa in being smaller, particularly in the male, and in having the hind tibiae pale yellow not orange. I propose to designate this **flavipes** subsp. n.

The measurements of the species and the new subspecies are here given for comparison. The measurements of the former are taken from specimens in the British Museum.

G. acutangulus.

	mm. ♂.	mm. ♀.
Total length . . .	39	47
Pronotum . . .	9·5	12·5
Elytra	30·5	36·5
Hind Femur . . .	21	26

G. acutangulus flavipes subsp. n.

Total length . . .	34·5 (31·5–36)	43 (39·5–44)
Pronotum . . .	8 (7·5–9·5)	10 (10–11)
Elytra	26·5 (25–28)	33 (30–34)
Hind Femur . . .	18 (16–19)	22 (21·5–24·5)

5 ♂♂ (type), 4 ♀♀. Mt. Kenya. Grassy places in forest, 8700–9800 ft. *G. L. R. Hancock.* 1 ♂, 1 ♀, Mau, Kenya, *D. R. Buxton.* 1 ♀, vi.1930. Kinangop, Kenya. Coll. *Turner.*

Heteropternis couloniana Sauss. 2 ♂♂, 6 ♀♀.

Upland grasslands and Juniper–Podocarpus zone, 8000–9000 feet.

These correspond very closely with specimens in the British Museum from Mt. Elgon, taken at over 10,500 feet in the heath zone, both in wing colour and in the intense dark red of the hind tibiae.

Parasphena keniensis Sjöst. 4 ♂♂, 14 ♀♀.

Juniper–Podocarpus zone in grassy clearings.

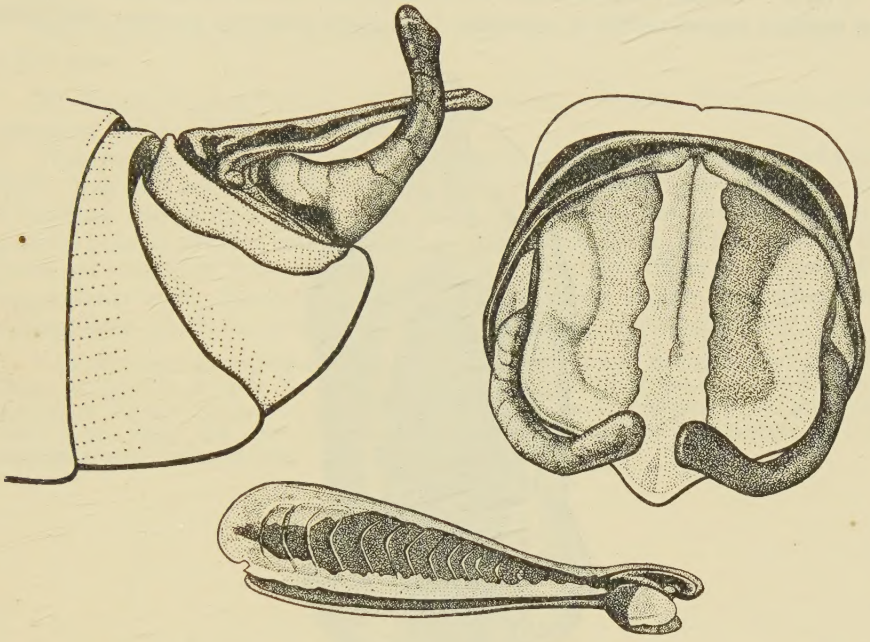
Sjöstedt refers to the absence of red on the hind legs of the typical specimens. In the present material red is prominent on hind tibiae and tarsi, and less so on middle and fore legs, fastigium and hind margin of pronotum.

Judging from the condition of the abdomen in the females, egg-laying was probably in progress.

Catantops impotens sp. n. (fig. 3).

♂ (type). Antennae short, not reaching beyond the middle of the pronotum, flattened, not expanded basally. *Frons* moderately oblique, diffusely punctured throughout; frontal ridge broad, contracted slightly below ocellus and lower still obsolescent, shallow, margins obtuse and indistinct. Fastigium smooth, roughly hexagonal, not impressed, widening in front of the eyes and again narrowing to join the frontal ridge. Occiput impunctate. *Pronotum* broad, tumid, not laterally constricted. Hind margin very obtusely angulate. Disc without lateral carinae, broadening posteriorly. Prozona diffusely and irregularly, metazona finely and closely, punctured. Median keel almost obsolete in prozona and indicated by a reddish line, slightly raised, in metazona. Three transverse sulci visible,

main and median sulci distinct and more or less continuous, anterior indistinct, discontinuous and confined to the disc. Lateral lobes longer than deep, with a few coarse punctuations and rugosities, particularly in the lower half, metazona profusely and regularly punctured. Hind margin obtusely angulate, lower margin broadly angled slightly behind the middle. Prosternal spine broad, blunt, inclined backwards and sulcate on front surface. Mesosternal interspace as broad as prosternal spine; metasternal lobes touching. *Elytra* greatly abbreviated, lobiform, not touching dorsally and extending just beyond the bases of the hind femora; apex very broadly rounded. *Supra-anal plate* quadrate with a central slightly raised and sulcate keel, lateral portions with broad dark irregular bands.



3

Fig. 3.—*Catantops impotens* sp. n. 1–2. Cerci. 3. Left femur.

Cerci curved, expanded basally and tapering, but not acute, apices approximate, dark coloured. Subgenital plate pyriform. Colouration in general reddish-brown, with well-defined dark brown and blackish areas. Gena with dark bands on posterior half extending behind the eye. Anterior margin of prozonal lobe with cream-coloured bar extending to about the middle of the eye, remainder of lobe filled with dark brown band not reaching to the disc. Metazona reddish-brown. Metathoracic pleurite with oblique cream-coloured bar. External surface of hind femora with broad black band narrowing basally and bounded below and basally by whitish margin. Ventral surface reddish. Tibiae dirty reddish-black. Abdominal tergites with black blotches diminishing in size towards the apex.

♀ (paratype). Larger. Metasternal lobes not contiguous. Colour similar to ♂.

Total length ♂ 17·5, ♀ 21; pronotum ♂ 4·5, ♀ 5·5; elytra ♂ 3, ♀ 4; hind femur ♂ 9·5, ♀ 10·5 mm.

Described from 10 ♂♂ and 26 ♀♀ Mt. Kenya. v.1935. *G. L. R. Hancock.* Forest in Juniper–Podocarpus zone.

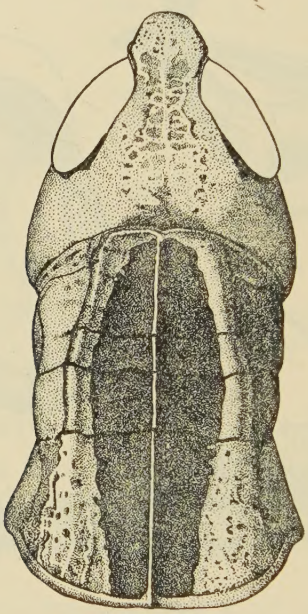
Is most nearly similar to *C. lobipennis* Sjöst., from Mt. Elgon, but can be readily separated from it by the longer and narrower pronotum, together with the shorter and straight male cerci and red hind tibiae of Sjöstedt's species.

Thisoicetrus brevipennis.

1914. I. Bolivar. *Trab. Mus. nac. cien. nat. Madrid (Zool.)* **20** : 23, 28.

Euprepocnemis montigena sp. n. (fig. 4).

♂ (type). General colouration light brown, hind tibiae red, blue and yellow. *Antennae* not reaching beyond middle of pronotum, basal joints somewhat narrower than apical



4

Fig. 4.—*Euprepocnemis montigena* sp. n. ♀.

half, colour darkening towards apex. *Frons* in profile moderately oblique, convex, impunctate. Frontal ridge not sulcate, without keels and expanding gradually below insertion of antennae, becoming less distinct at the level of lower margin of eye. A subocular black area on inner margin of gena. Vertex prominent, only slightly concave, margins low and obtuse, rounded in front. A low carinula extending from fastigium towards the occiput, but not crossing it. *Pronotum* not broader than head, prozona about one and a half times as long as metazona. Disc narrow, in prozona smooth and velvety, in metazona finely punctured; both anterior and posterior margins straight, very slightly rounded, sides slightly carinate, callose, shining; median carina low, straight in profile. Lateral lobes deeper than long, finely punctured in metazona, sculptured in anterior half only of prozona, which is shining. Prosternal spine broad, flattened and widened apically nd bent back. Mesosternal lobes separated by interspace in breadth equal to that of prosternal spine. Metasternal lobes contiguous. *Elytra* dark castaneous, abbreviated, not extending beyond one-third the length of the hind femur. Transverse venation close,

light coloured in discoidal area. Apex broadly rounded. *Supra-anal plate* elongate, tongue-shaped, broadly sulcate centrally with narrow impressed margins. Cerci narrowing to apex, decurved and slightly incurved with apex acute, considerably longer than supra-anal plate. *Hind femora* light castaneous, either unmarked or with darker suffusion on outer surface. Knees black on upper half of inner and outer surfaces. Tibiae annulate basally with whitish, bluish-grey with whitish intrusions to beyond the middle, sanguineous distally; armed with about 8 outer and 7 inner whitish-black tipped spines, some of which may be poorly developed or absent. Tarsi red.

♀ (paratype). Larger, but with colouration similar to that of ♂. Frontal ridge relatively broader and becoming obsolete below ocellus. Vertex raised, immarginate and without carinula.

Total length ♂ 19, ♀ 25·5; pronotum ♂ 4, ♀ 5·5; elytra ♂ 6, ♀ 7·5; hind femora ♂ 12·5, ♀ 16·5 mm.

Mt. Kenya, 7 ♂♂ and 15 ♀♀. *G. L. R. Hancock.* v.1936. From open grassy places in Juniper–Podocarpus zone.

This interesting species should probably be placed next *E. brachyptera* Sjöst.,* since it resembles the latter in the non-impressed vertex provided with a carinula, and in the shape of the ♂ cerci. Differences are, however, the more parallel sides of the disc and the multi-coloured hind tibiae, which in *E. brachyptera* are a uniform fine grey-blue. On the other hand, there is a remarkable resemblance to *E. ibandana* G. Tos, a very common species throughout east Africa, from which the present species differs mainly in its brachyptery.

* In 1910 Brunner described *Euprepocnemis brachypterus* from Madagascar in Voeltzkow: *Reise in Ostafrika* 2 : 643. In 1933 (*Ark. Zool.* 26A (11) : 24) Sjöstedt described another species of the same genus from Mt. Elgon under the name *E. brachyptera*. As the specific name in the latter case must be considered preoccupied I propose to substitute the name **Euprepocnemis keniensis** nom. n. for the second of these.

A REVISION OF THE MALAYAN SPECIES OF *CURETIS* HÜBNER (LEPIDOPTERA–LYCAENIDAE)

By A. Steven Corbet, F.R.E.S.

Important papers dealing with the genus *Curetis* Hbn. are those by Fruhstorfer (1908, *Stettin. ent. Ztg*, **69** : 49–59), Chapman (1915, *Novit. Zool.*, **22** : 80–104) and Seitz (1924, *Grossschmett. Erde*, **9** : 933–936), while the Javanese species have been considered by Toxopeus (1935, *Ent. Med. Ned.-Indië*, **1** : 10–13). Chapman's extensive paper contains photographs of the male genitalia of all species except *nesophila* Feld. Fruhstorfer and Seitz failed to separate the forms of certain closely allied species, but a study of the Fruhstorfer types in the British Museum has cleared up almost all outstanding difficulties in connection with the genus.

With most species of *Curetis*, individual variation is considerable while, in any one sub-region, the geographical differences are slight. Examination of long series of the Malaysian species suggests that, as with other Lycaenidae genera, the Javanese representatives are somewhat lighter and show more restricted black markings on the upperside than the corresponding forms from Neomalaya (*i.e.* the Malay Peninsula, Sumatra and Borneo), but it is debatable how far subspecific separation is justified between the truly Malaysian forms. In the very distinct Nias subspecies, the males are browner and dark dusted, and the orange areas on the upperside of the females are severely restricted. Toxopeus (1926, *Tijd. Ent.*, **69** : lxx) considered that the chain of islands off the west coast of Sumatra, extending from Engano towards the Nicobar Islands, constituted a separate zoo-geographical sub-region which he termed Paramalaya. It seems probable that further study of the Indo-Australian Lycaenidae will support Toxopeus' view that Paramalaya exhibits a degree of specialisation comparable with that shown by such sub-regions as Neomalaya and the Philippines.

Examination of the male genitalia.

An examination of the male genitalia of the *Curetis* species has confirmed Chapman's conclusions, to a large extent, as far as the Malaysian species are concerned. The genus falls naturally into three groups, both as regards male genitalia and underside pattern : in the *thetis* section, the end of the harpe is soft and clothed with hair, while this organ is hard and smooth in the *bulis* group : in *insularis* the harpe is soft and haired while the extremity has a chitinous cap. The remarkably blunt dorsal hooks of *insularis*, almost suggesting that the tips had been broken, are found in no other species.

The male genitalia of *bulis* and *sperthis* are abundantly distinct : in *sperthis* the shorter aedeagus has a tapering and pointed extremity, the more slender clasper is shorter and the terminal hook of the harpe is narrower, rather longer, and more strongly pointed. Between *bulis* and *santana* the differences in the male genitalia are slight, but the terminal hook on the harpe of *santana* appears to be blunter and broader.

In the *thetis* group, *thetis* is characterised by the lateral projection on the terminal lobe of the harpe. The genitalia of the Ceylonese *arcuata* Mre. (= *phaedrus* Chapman *nec* Fabricius) differ quite distinctly from those of *thetis*. The male genitalia of *saronis* exhibit a certain amount of variation, but the rather abrupt broadening of the clasper in the distal half, and the irregular edge of the terminal lobe of the harpe are distinctive.

The remaining Malaysian species of the *thetis* group were not fully understood by Chapman. In the Philippine *nesophila* Feld. (*nec* Chapman) the clasper is rather slender, the extremity of the harpe is small and has the appearance of having a chitinous cap. With *felderi* Dist. (= *nesophila* Chapman *nec* Felder) the extreme tip of the harpe appears to be chitinous and bent back over the lobe, and the base of the harpe is very broad; the most remarkable feature of the genitalia, however, is the strongly curved aedeagus.

Chapman's *tagalica* comprised two species differing considerably in upperside pattern, although not remarkably so in male genitalia: nevertheless, the genitalia differences are distinct and constant. In *tagalica*, the aedeagus is shorter and the clasper is longer and much broadened centrally, this widening of the clasper giving the distal half a pear-shaped appearance which is the most easily recognised character. In *hera* the clasper is gradually thickened. Of Chapman's figures of *tagalica* genitalia, only nos. 75 and 76 represent that species, no. 73 is typical *hera* from Nias, no. 74 is the Sumatran form of *hera*, and no. 77 proclaims *talautensis* to be a *hera* race as the figures (nos. 11 and 12) of the male suggest.

Key for the separation of the Malaysian species of Curetis.

1 (6). UnF discal band placed diagonally and pointing to the apex.

bulis group.

2 (3). UpH in both sexes the orange-red colour does not reach the costal margin, which is rather broadly black-bordered . . . . . *sperthis.*

3. UpH in both sexes the orange-red colour reaches the costal margin.

4 (5). Un discal bands comparatively narrow and almost obsolete in spaces 4, 3 and 2 on H. ♂ upF black distal border turned in at tornus and continued for a variable distance along the inner margin. ♀ up orange-red or shining white, with very broad black borders: F base broadly black dusted . . . . . *bulis.*

5. Un discal bands broader, more heavily shaded, with the outer edges more strongly defined in black: the band is always prominent and clearly defined in spaces 4, 3 and 2 on H, with the spot in space 3 large and elongated. ♂ upF black distal border abruptly terminated within 2 mm. from the tornus. ♀ up orange-red, bordering as in *bulis* . . . . . *santana.*

6. Un discal bands roughly parallel to wing margins.

7 (9). Un discal bands linear and quite regular on both wings.

insularis group.

8. ♂ up deep coppery-red, F with broad black bordering and narrow cell-end mark, H with tornal half black dusted. ♀ black with pale orange discal areas . . . . . *insularis.*

9. Un discal bands not linear but comprising conjoined lunules, with those in spaces 4 and 5 on H out of line with the rest.

thetis group.

10(13). Un shining white.

11(12). Un markings almost obsolete and outer edge of discal band not blackened. ♂ upF black border narrow and angled at apex. ♀ up black with shining white discal areas . . . . . *thetis.*

12. Un discal band very narrow, comprising black lunules, inwardly slightly shaded and straight from vein 1 to vein 6 on F. ♂ upF with broad black bordering, inner edge more or less regular; cilia pale. ♀ up with orange areas . . . . . *saronis.*

13. Un greyish white, with matt surface: discal band inwardly shaded and lunules in spaces 4 and 5 on F out of line with lower part of band.
14(16). Un discal band rather narrowly shaded.
15. UnF with lunules in spaces 4 and 5 right out of line and the outer edge of the band forming a right angle at vein 4. ♂ F apex not pointed. ♂ upF inner edge of black border evenly curved and semicircular from base to mid-termen. ♀ up with orange or white areas . . *hera*.
16. Un discal band broadly shaded.
17(18). Un discal band very lunulated, outer edge rather regular on both wings: on F lunules on spaces 4 and 5 not much out of line and lunules on each side of vein 4 meeting at an acute angle. ♂ F apex pointed. ♂ upF as in *hera*. ♀ up with orange areas broader than in *hera*. *felderi*.
18. Un discal band straighter and F lunules in spaces 4 and 5 right out of line: shading heavier than in *hera* or *felderi*. ♂ upF black border narrow and angled at apex, with the veins in the subapical area black dusted for about 2 mm. after entering the orange-red area. ♀ up with orange areas . . . . . *tagalica*.

1. *Curetis sperthis sperthis* Feld. & Feld.

Anops sperthis Felder & Felder, 1865, *Reise Novara Rhopal.*: 222; ♂ Malacca Interior.

In general, *sperthis* is browner and less copper-coloured than *bulis* and, on the underside, the discal bands are narrower, less heavily dark dusted, and not so diagonally placed on the fore-wing.

The male differs from the Javanese subspecies *latipicta* Fruh. (Seitz, pl. 162, g 8 and Piepers & Snellen, pl. xxiv, f. 119a), of which the form with a restricted black inner border on the fore-wing is *semilimbata* Fruh., only in the rather broader black bordering on both wings. The underside of Distant's female *sperthis* (*Rhop. Malay.*, pl. xxii, f. 27) proclaims it to be an *insularis* and true female *sperthis* has not been described.

♀. Fore-wing termen slightly convex, and not concave as in *malayica* and *gabrieli* females, and in the rounded hind-wing the tornus is not pointed.

Upperside. As in *malayica*, but the inner edge of the fore-wing black costal border is more regular and, on the hind-wing, the orange-red discal patch is ovate rather than crescentic, and the costa is broadly bordered with fuscous. In fact, the upperside hardly differs from that of *jopa* ♀.

Underside. Resembles the male, except that the discal markings are rather more distinct.

Wing expanse 47 mm.

Neoallotype. Malay Peninsula: Perak, Larut Hills, 4500 feet, 24.ii.1932 (*H. M. Pendlebury*). In Selangor Museum.

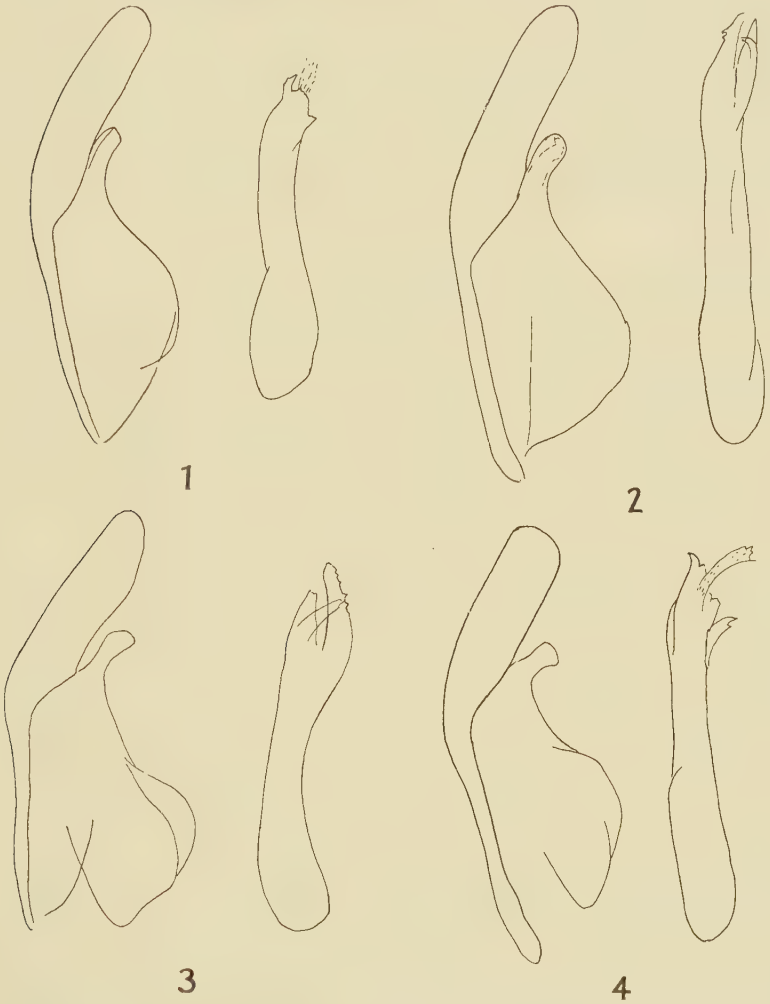
The other Malaysian races are *minima* Dist. & Pryer (Borneo) and *baweana* Fruh. (Bawean): Sumatran and Bornean *sperthis* hardly differ from the name type, but in *baweana* the male is bright coppery-red with heavy black bordering, and in the female the yellow area on the hind-wing is restricted. The smaller and dark dusted *niasica* Fruh. (Nias), figured in Seitz, pl. 162, f 3 ♂, is remarkable for the obsolete inner border on the fore-wing, although vein 1 is dark dusted.

2. *Curetis bulis malayica* Feld. & Feld.

Anops bulis Doubleday *in* Doubleday & Westwood, 1852, *Gen. Diurn. Lep.*, 2: 473, pl. lxxv, f. 5 ♂; Simla.

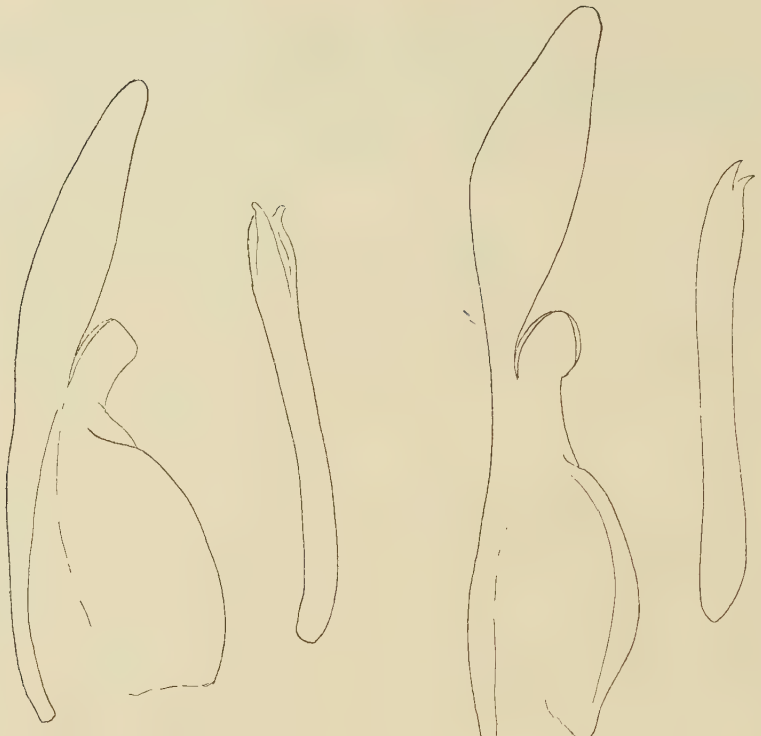
Anops malayica Felder & Felder, 1865, *Reise Novara Rhopal.*: 221, pl. xxvii, f. 18 ♂; Malacca Interior.

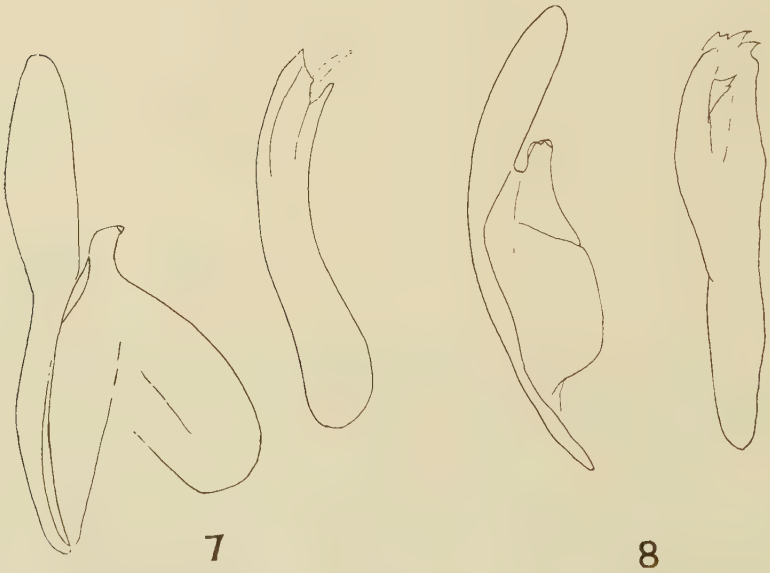
Curetis malayica Distant, 1884, *Rhop. Malay.* : 202, pl. xxii, f. 28 ♂, pl. xliv, f. 14 ♀.
Curetis thetis nisias Fruhstorfer, 1908, *Stettin. ent. Ztg*, **69** : 50; ♀ Malay Peninsula.
Curetis sanatana malayica f. *honesta* Fruhstorfer, 1908, *loc. cit.* : 58; ♂ West Sumatra.
Curetis thetis nisias Seitz, 1924, *Grossschmett. Erde*, **9** : 934.
Curetis sanatana honesta Seitz, 1924, *loc. cit.* : 936, pl. 162, g 4 ♂, 5 ♂ und., 6 ♀.
Curetis sanatana malayica Seitz, 1924, *loc. cit.* : 936.
Curetis malayica Corbet & Pendlebury, 1934, *Butt. Malay Pen.* : 197, pl. xiii, f. 187 ♂.



FIGS. 1–4.—Male clasper, harpe and aedeagus of: (1) *Curetis arcuata* Mre. (Ceylon); (2) *C. thetis* Dry. (Bengal); (3) *C. saronis gloriosa* Mre. (Cachar); (4) *C. saronis sumatrana* subsp. n. (Sumatra) type.

The differences between *bulis* and *santana* are given in the key. The male genitalia of the two are very similar and Chapman regarded them as conspecific. Although Javanese *bulis* and *santana* resemble each other more closely than do the Neomalayan representatives, Toxopeus held them as distinct and I incline strongly to the opinion that two species are present for, in all my Malayan specimens, collected between 1927 and 1932, the absence of a fore-wing black inner border is associated with the more prominent underside markings detailed





FIGS. 5–8.—Male clasper, harpe and aedeagus of: (5) *C. hera jopa* Fruh. (Malaya); (6) *C. tagalica tagalina* Fruh. (Malaya); (7) *C. felderi* Dist. (Malaya) type; (8) *C. nesophila bazilana* Fruh. (Mindanao).

in the key. Nevertheless, the relationship between the two must be close, and they are deserving of study in the field.

The correct allocation of the names of the *bulis* forms in Neomalaya is :—

♂ upH with a black basal streak above the cell	f. *malayica* Feld.
♂ upH without a black basal streak above the cell	f. *honesta* Fruh.
♀ up ground-colour orange-red	f. *malayica* Feld.
♀ up ground-colour shining white	f. *nisias* Fruh.

C. bulis malayica Feld. is widely distributed in Malaya, Sumatra and Borneo, and occurs also on the Malayan east coast island Pulau Tioman : in my experience it is the only Malayan *Curetis* found much above 2000 feet. The Javanese race *argentata* Tox. (Seitz, pl. 162, g 7 ♀, h 1 ♀, and Piepers and Snellen, pl. xxiv, f. 118 ♂), hardly differs from *malayica* : in the dark dusted Nias subspecies *gé* Fruh. (Seitz, pl. 162, e 2 & 3 ♂), the fore-wing black inner border is very narrow and restricted.

3. **Curetis santana gabrieli** subsp. n.

Anops santana Moore, 1857, *in* Horsfield & Moore, *Cat. Lep. Mus. E. Ind. Co.*, **1** : 54; ♂ Java. Figured in Boisduval, 1836, *Spec. Gén. Lep.*, **1** : pl. xxiii, f. 1 ♂.
Curetis aesopus Distant (*nec* Fabricius), 1884, *Rhop. Malay.* : 202, pl. xxiv, f. 12 ♂.

The male type of *santana* Mre. is a *sperthis* with a black border on the fore-wing inner margin : in such a case where the original description refers to a good figure, it appears advisable to disregard the type specimen where this pertains to a different species.

The Neomalayan race of *santana* is distinct from the Javanese form (Seitz, pl. 162, g 3 ♂).

♂. Usually smaller than *santana* ♂ and the hind-wing tornus is not as pointed.

Upperside. Differs from *santana* in the deeper ground colour, and in the broader, black, fore-wing border, whose inner edge is more or less regularly rounded and not excavated.

Underside. Greyer than in *santana* and without the yellowish tinge : markings similar.

Wing expanse 39 mm.

Holotype. Malay Peninsula : Pahang, Bentong Forest Reserve, 24.iii.1929 (*A. S. Corbet*). In British Museum.

♀. The hind-wing more ample than in *malayica* ♀, but the *upperside* differs only in the rather paler orange colouring.

Underside. As in the male, except that the discal markings are broader.

Wing expanse 44 mm.

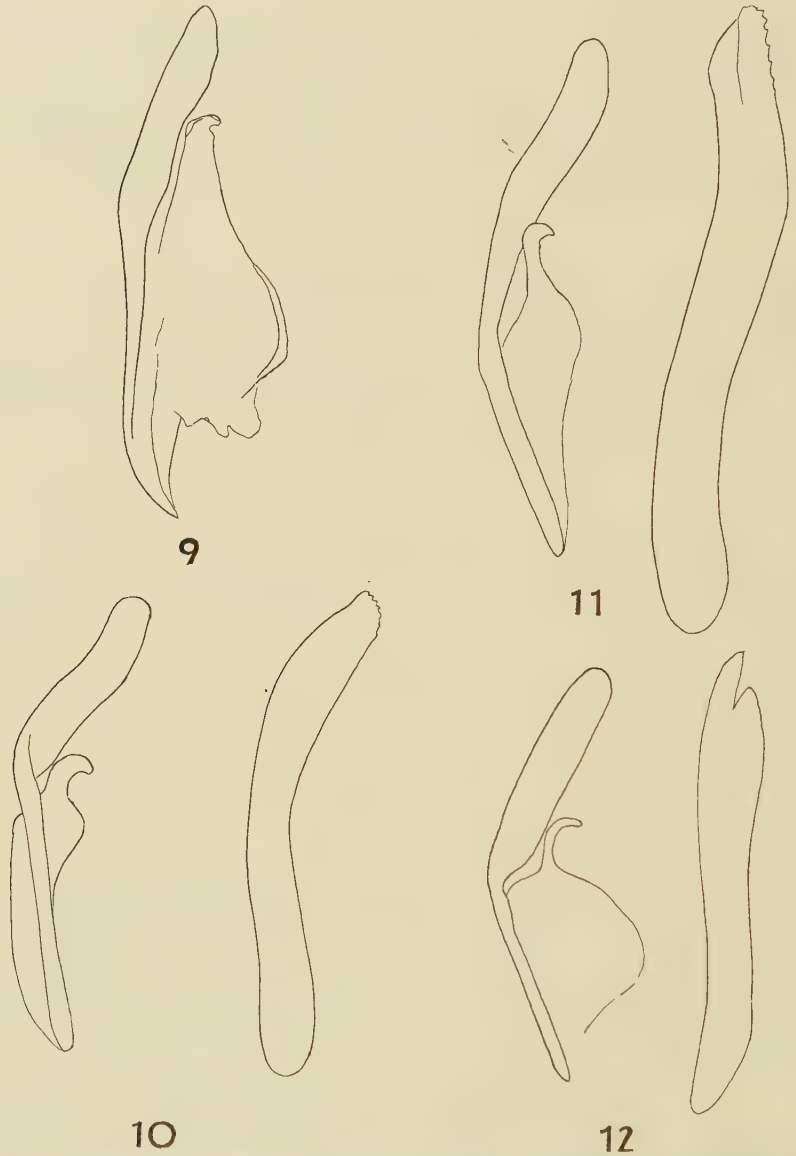
Allotype. Malay Peninsula : Negri Sembilan, Cape Rachado Lighthouse, x.1920 (*S. Harding*). In Selangor Museum. This appears to be the only female known of the collective species.

This distinctive new subspecies, which is not uncommon on the plains in the Malay Peninsula, and occurs in Pulau Tioman, Sumatra and Borneo, is named after Mr. A. G. Gabriel, from whom I have received considerable help while investigating the Malayan Rhopalocera in the National collection.

4. *Curetis insularis pseudoinsularis* Fruh.

Phaedra insularis Horsfield, 1828, *Cat. Lep. E. Ind. Co.* : 125; ♂ Java. Figured in Horsfield & Moore, 1857, *Cat. Lep. Mus. E. Ind. Co.*, pl. ia, f. 14 ♂.
Curetis insularis sperthis ♀ f. *pseudoinsularis* Fruhstorfer, 1908, *Stettin. ent. Ztg*, **69** : 53; ♀ North-east Sumatra.
Curetis insularis Distant, 1886, *Rhop. Malay.* : 451, pl. xli, f. 6 ♂, 7 ♀.
Curetis insularis pseudoinsularis Seitz, 1924, *Grossschmett. Erde*, **9** : 935, pl. 162, d 2 ♂, 3 ♂ und.

This almost purely Malaysian species shows little racial differentiation, and both sexes can be distinguished readily by the narrow and regular discal line on the underside. Above, the male differs from that sex of *hera* and *felderi* in the broad, black shading in the tornal half of the hind-wing. Nymotypical *insularis* Hsf. is figured in Seitz, pl. 162, b 6 ♂, 7 ♀, and in Piepers and Snellen, pl. xxiv, f. 120 a ♂, b ♀. The male type of *eda* Fruh. (Java) is small and the



Figs. 9–12.—Male clasper, harpe and aedeagus of: (9) *C. insularis pseudoinsularis* Fruh. (Malaya) clasper and harpe only; (10) *C. santana gabrieli* subsp. n. (Malaya); (11) *C. bulis malayica* Feld. (Malaya); (12) *C. sperthis sperthis* Feld. (Malaya). All camera lucida drawings of the same magnification.

lunulated discal bands beneath are inwardly shaded much as in *hera* : a second specimen in the Fruhstorfer collection of the same size and with a similar upperside has the usual *insularis* pattern beneath. The body is missing from the type specimen, but there is a genitalia preparation of *insularis* which may correspond to it.

Curetis thetis Dry.

Papilio thetis Drury, 1773, *Ill. Exot. Ins.*, **2** : 16, f. 3 & 4 ♀ ; Bombay.

Typical *thetis* (figured in Seitz, pl. 162, b 1 ♂, 2 ♀), with the narrow black border on the male fore-wing angled at the apex, occurs from Ceylon and South India to Bengal, and the species reappears again in the Moluccas and extends to New Guinea and the Solomon Islands. From Ceylon and India to New Guinea, the female *thetis* is white * with heavy black bordering; in the more easterly races, however, such as *solita* Btlr. (New Britain), figured in Seitz, pl. 162, g 2 ♀, the restricted pale areas are orange.

The species must be extremely rare in Malaysia : the only specimens known to me are single females from Sumatra and North Borneo in the National collection and Tring Museum respectively. I have been unable to trace the broad bordered Bornean male figured as *thetis* by Chapman (*loc. cit.*, pl. iii, f. 8, 9), but suspect that it may be *saronis*. The Malaysian females resemble the typical form.

5. **Curetis saronis sumatrana** subsp. n.

Curetis saronis Moore, 1877, *Proc. zool. Soc. Lond.*, **1877** : 587; ♂♀ South Andamans.

This species occurs in Assam, Burma, Siam, the Andaman and Nicobar Islands, and is a rare species in Malaysia, where the males differ very little from typical *saronis*.

♂ *Upperside.* Resembles typical *saronis*, from the Andamans, but the copper-red colour is paler and the tornal half of the hind-wing less dark dusted. Differs from the Siamese race *indosinica* Fruh. (Seitz, pl. 162, c 4 & 5) in the rather narrower black apical bordering on the fore-wing, and in the broader hind-wing distal border, which is excavated between the veins as in *saronis*. Cilia pale edged, but not as pale as in *indosinica*.

Underside. Whiter than in *saronis* or *indosinica*, with the more prominent discal bands blacker and more lunulated.

Wing expanse 35-5 mm.

Holotype. SUMATRA. In British Museum. Other Sumatran males in the Tring Museum. A male from Perak (Pulau Rumbia, iii.1926, ex Coll. Brigadier W. H. Evans) in the British Museum, with wing expanse 41 mm., constitutes the first record of the species from Malaya.

Burmese specimens are referable to the subspecies *gloriosa* Mre., described from Sylhet.

6. *Curetis hera jopa* Fruh.

Curetis insularis hera Fruhstorfer, 1899, *Berlin. ent. Z.*, **44**, pl. ii, f. 4 ♀; Nias; 1900, *loc. cit.*, **45** : 28; ♂♀ Nias. Figured in Seitz, *Grossschmett. Erde*, **9**, pl. 162, f 4 & 5 ♀.
Curetis insularis jopa Fruhstorfer, 1908, *Stettin. ent. Ztg*, **69** : 53; ♂ West Borneo, ♀ North Borneo.
Curetis insularis jopa Seitz, 1923, *Grossschmett. Erde*, **9** : 935, pl. 162, c 2 ♂, 3 ♀.

The differences usually found between this species and the next are detailed in the key. It may be added that *felderi* is usually larger, the inner submarginal

* Although the figures in Seitz, pl. 162, e 4 ♂, 5 ♀, show the Bazilan race *aurantiaca* Fruh. as having a yellow female, in the original description it is stated that the female is white.

markings on the underside are more prominent and the fore-wing termen in the male is straighter. With many specimens, however, dissection is the only certain means of identification.

Hitherto, there have been no definite records of the species from the Malay Peninsula, but I obtained a number of specimens in Selangor and Pahang at elevations up to 2000 feet. The sexes from Malaya, Sumatra and Java agree with Bornean *jopa*. The white female figured in Seitz, pl. 162, c 3, which is not the allotype, has been ascertained to be a *jopa*.

7. *Curetis felderi* Dist.

Curetis felderi Distant, 1884, *Rhop. Malay.* : 203, pl. xxiv, f. 3 ♂, pl. xxii, f. 26 ♀; Malay Peninsula.
Curetis nesophila Chapman (*nec* Felder), 1915, *Novit. Zool.*, **22** : 91.

Chapman confused *felderi* with *nesophila* and considered that the type specimen of the former did not agree with Distant's figure of the male. I have examined the types of *felderi* and have no doubt whatever that they are the specimens described and figured by Distant in *Rhop. Malay.* : the figure of the male, however, incorrectly shows the discal band on the fore-wing beneath pointing to the apex instead of being continued more or less parallel to the wing margin.

Chapman's figure of the male upperside (pl. iii, f. 10) may be a *hera* form, but the underside on pl. v, f. 28 and the male genitalia on pl. xv (no. 71 from a specimen without locality label and no. 72 from a Bornean male) are *felderi*. The Bornean male no. 72 is curious in that the underside discal bands are narrow and almost linear as in true *nesophila*.

C. felderi is a rare species and shows little subspecific differentiation : it is represented in the British Museum from Malaya, North-east Sumatra, Bila (off the east coast of Sumatra), Borneo, Java and the Moluccas.

Neither Chapman nor I have had access to the type of *nesophila* Feld., but the reference in the original description to a broad, black, triangular apical border on the fore-wing of the male, and to narrow, undulating, discal strigae on the underside, leaves little doubt that it refers to the Philippine species figured in Semper, *Schmett. Philipp. Ins.*, pl. xxxi, f. 29, ♂♀. In typical *nesophila* * the fore-wing black border is semicircular and the hind-wing border is very narrow : in *bazilana* Fruh.† (Bazilan and Mindanao) the fore-wing black border is more angled and broader at the tornus and, on the hind-wing, the veins are dark dusted before entering the broader black border. In both races, the underside is white and the very narrow discal bands are arranged as in *hera*, although examples occur with broader bands which are dark shaded.

8. *Curetis tagalica tagalina* Fruh.

Phaedra tagalica Felder, 1862, *Wien. ent. Monats.*, **6** : 289; ♂ Luzon. Figured in *Reise Novara Rhopal.* : 221, pl. xxviii, f. 19 ♂, 20 ♀.
Curetis sanatana tagalina Fruhstorfer, 1908, *Stettin. ent. Ztg*, **69** : 58; ♂ North Borneo.
Curetis sanatana tagalina Seitz, 1924, *Grossschmett. Erde*, **9** : 936.

A male in my collection from Pulau Tioman constitutes the first record of this species from the Malay Peninsula. It resembles *tagalina* from Borneo and differs from nymotypical *tagalica* (Seitz, pl. 162, b 3 & 4 ♂), in the broader bordering above and in the more heavily shaded underside.

* *Phaedra nesophila* Felder, 1862, *Wien. ent. Monats.*, **6** : 289 ; ♂ Luzon.

† *Curetis insularis bazilana* Fruhstorfer, 1899, *Berlin. ent. Z.*, **44**, pl. ii, f. 3 ♀; Bazilan; 1900, *loc. cit.*, **45** : 28; ♂♀ Bazilan.

Chapman reported *tagalica* from Sumatra and Nias, but his specimens were found to be *hera*. The British Museum has no Malaysian examples of the species from other than the localities mentioned above : *jolona* Fruh. (Jolo) figured in Seitz, pl. 162, c 7 ♂, d 1 ♀, *palawanica* Stgr. (Palawan), with white females, and *izabella* Fruh. (Bazilan) have been ascertained to be *tagalica* races.

Of the forms considered in this paper, the types of the following have been examined :—

In the British Museum : *arcuata* Mre., *baweana* Fruh., *bazilana* Fruh., *bulis* Dbl., *in* Dbl. & Westw., *eda* Fruh., *gé* Fruh., *gloriosa* Mre., *hera* Fruh., *honesta* Fruh., *indosinica* Fruh., *insularis* Hsf., *izabella* Fruh., *jolona* Fruh., *jopa* Fruh., *latipicta* Fruh., *niasica* Fruh., *pseudoinsularis* Fruh., *santana* Mre., *saronis* Mre., *semilimbata* Fruh., *solita* Btlr. and *tagalina* Fruh. ; in the Tring Museum : *felderi* Dist., *malayica* Feld., *sperthis* Feld., *tagalica* Feld. and *talautensis* Chapm.

I am indebted to the Trustees of the British Museum (Natural History) for permission to study their collections, to the late Lord Rothschild, F.R.S., for granting facilities for the examination of the Tring types and of the *Curetis* material studied by Chapman at Tring, to Mr. H. M. Pendlebury for the loan of specimens from the Selangor Museum, and to Brigadier W. H. Evans, C.S.I., C.I.E., D.S.O., for constructive criticism.

Note added on 27.ix.1937. The correctness of the conclusion regarding the identity of *nesophila* Feld. has been confirmed by photographs of the type in the Senckenberg Museum kindly supplied by Dr. Ellie Franz.

NEW AFRICAN CARABIDAE (COL.), INCLUDING THE DESCRIPTION OF A NEW GENUS

By Everard B. Britton, M.Sc., F.R.E.S.

Department of Entomology, British Museum (Natural History).

The greater part of the Carabidae described in this paper were collected in Northern Rhodesia by Mr. H. C. Dollman, and are in the British Museum collection. The remainder were taken from the collection of the Imperial Institute of Entomology. My thanks are due to Mr. G. E. Bryant for permission to examine this material. I also wish to express my thanks to Dr. K. G. Blair for his kindly criticism and advice. The types of all the species described here are in the British Museum.

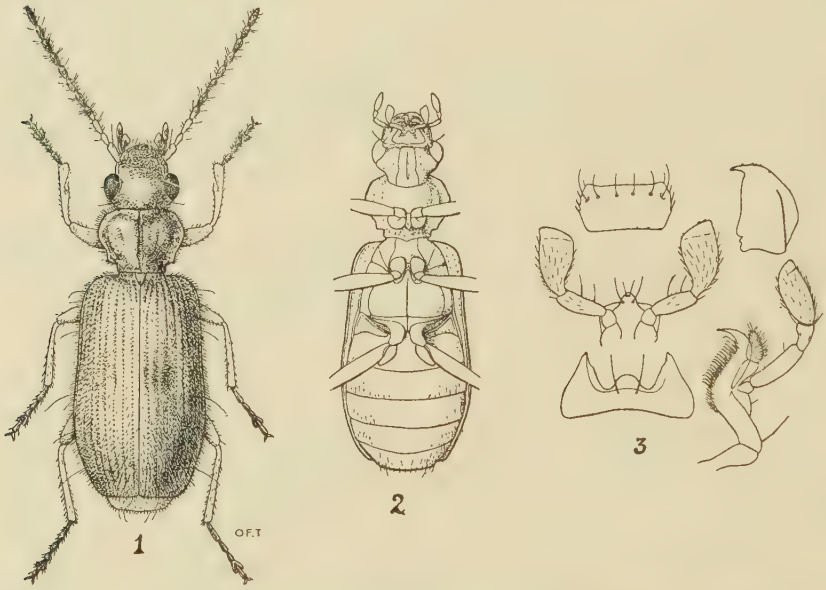
Lebiini.

Dasiosoma gen. n.

Head : as broad as long; eyes prominent and hemispherical; clypeus and labrum transverse, rectangular, with setae as in fig. 2; mandibles strongly curved, very broad at the base and very sharply pointed. The head is abruptly constricted behind the eyes to a narrow neck; pubescent, with two supraorbital setae. The palpi are pubescent. The terminal segments of the maxillary palpi are fusiform, but slightly compressed at their apices; those of the labial palpi are expanded, being twice as wide though of the same length. The antennae

from the middle of the 4th segment to the apex are more densely pubescent than basally. The mentum is deeply emarginate with a broad blunt tooth in the middle; lateral lobes acute; labium as figured, the paraglossae being shorter than the ligula. The inner lobe of the maxilla is strongly curved and terminates in a sharp point; densely ciliate along the inner edge. *Prothorax :* transverse; covered dorsally with long pubescence like the head; disc convex, with a broad deep channel extending from apex to base; lateral margins wide and recurved; base produced behind the posterior angles; basal margin straight. *Elytra :* covered with long pubescence; elongate; descending steeply at the sides. Each elytron is somewhat depressed in the middle from the first to the fifth stria. The ventral surface of the body is covered with a short pubescence, which becomes denser towards the apex of the abdomen. *Legs :* pubescent; fourth tarsal segments deeply bilobed; claws dentate, each with seven unequal teeth. *Wings :* fully developed.

Genotype : *Dasiosoma testaceum* sp. n. (figs. 1, 2 & 3).



Figs. 1–3.—*Dasiosoma testaceum* gen. et sp. n.; 2, ventral side; 3, mouth parts; figs. 1 & 2, × 8; fig. 3, × 26.

Dasiosoma testaceum sp. n.

Characters as for the genus and as follows :—

Length : 5·25 mm.–6·40 mm. *Colour :* head, prothorax, elytra and ventral surface reddish testaceous; palpi piceous, yellow at apices; first two segments of antennae testaceous, remainder piceous; legs testaceous with tarsi and apices of tibiae and femora brown. *Head :* width between the eyes 0·72 mm.; length approx. 1·0 mm. (measurements of holotype). *Pronotum :* length 1·0 mm.; greatest width 1·3 mm.; width across hind angles 1·0 mm.; anterior angles obsolete, the sides curving outwardly from apex for almost half their length then sinuate above the posterior angles which are somewhat variable, subrectangular and sharp. *Elytra :* length 3·5 mm.; greatest width 2·2 mm. Intervals flat, each stria marked by a row of sharply defined punctures which are deep at the base, becoming smaller and shallower towards the apex. Punctures separated by less than their own width.

Locality. N.W. Rhodesia: Lukanga; iv.–vii.1915; 13 ♂♂, 15 ♀♀: Kashitu; 26.iv.1915; 2 ♀♀ (*H. C. Dollman*). Taken "amongst grass-roots in vlei."

Dasiosoma must be placed in the tribe Lebiini. The nearest known African genus is *Demetrias*, from which *Dasiosoma* differs in having the tooth of the mentum blunt instead of sharply pointed, the terminal joints of the palpi flattened instead of fusiform, and the neck much more sharply constricted. Further, *Demetrias* is not pubescent, and in it the paraglossae are slightly longer than the ligula. *Dasiosoma* is much more closely allied to the oriental genus *Lachnoderma*. Both genera have the base of the pronotum produced behind the posterior angles, the mentum with a median tooth, dentate claws, the labrum truncate, the terminal segment of the labial palpi expanded and flattened, the fourth tarsal segments bilobed, the head greatly constricted behind the prominent eyes, and in both the body is covered with a long pubescence. *Dasiosoma* differs from *Lachnoderma* in having the tooth of the mentum simple instead of bifid, while the body is more cylindrical, the pronotum less expanded at the sides, and the pronotum much more deeply grooved. Species of *Lachnoderma* are found in India, Malaya, Japan and Australia.

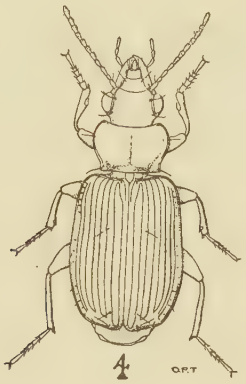


Fig. 4.—*Lobodontus ater* sp. n. × 4·2.

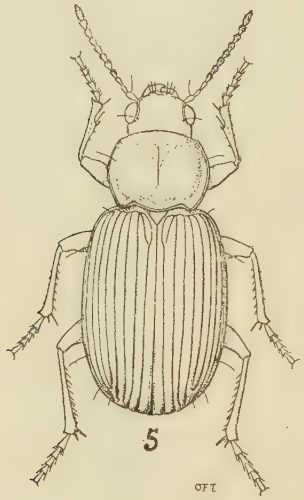
Lobodontus ater sp. n. (fig. 4).

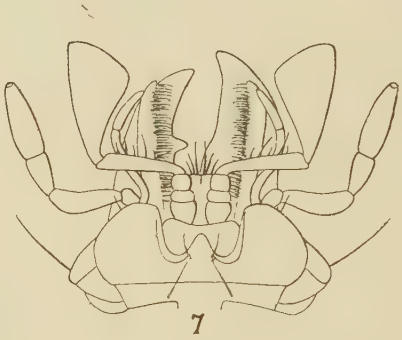
Length: 9 mm. *Colour:* dorsal surface of the head, thorax and elytra, shining black; antennae, palpi, clypeus and labrum reddish brown; tips of palpi yellow; mandibles black and legs dark brown; a dull red spot between the eyes. Mentum reddish-brown; ventral surface of head black, and that of thorax dark brown with the metasternum paler, as are the abdominal sternites and the coxae. *Head:* smooth and unpunctured; *Prothorax:* length 1·6 mm.; greatest width 2·80 mm.; width across base 2·24 mm. (measurement of type); smooth and unpunctured; anterior margin concave; anterior angles rounded; width across basal angles less than that across the apical angles; median line slightly impressed; disc moderately convex; base truncate, straight. *Elytra:* length 5·25 mm.; greatest width 4·00 mm. Intervals slightly convex, entirely unpunctured except for three large setigerous punctures on the 3rd interval, one immediately anterior to the middle, the second near and the third at the apex. Striae finely punctured. *Legs:* at the apex on the inside of the middle tibia in the male is the small deep excavation found in a number of genera of Lebiini (the subtribe Lebiina of Thomson).

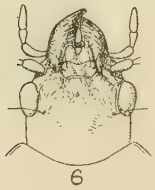
Locality. N.W. Rhodesia: Kalilele, Solwezi District (26°20′.E., 12°10′.S.), 11.ix.16 (*H. C. Dollman*). 4 ♂♂, 2 ♀♀. Kashitu, i.15. (*H. C. Dollman*) 1 ♂. All taken under bark.

This species is distinguished from all known species of *Lobodontus* by the fact that the dorsal surface is entirely black.

Having examined the type of *Coptodera trimaculata* (Murr.), I find that the species must be referred to the genus *Lobodontus*. The mentum in this species has a large pointed tooth in the middle and the claws are simple, whereas in







Figs. 5–8.—*Idiomorphus xanthochrous* sp. n., fig. 5, × 5; 6, head; 7, mouth parts, ventral; 8, ligula.

Coptodera the mentum has no tooth and the claws are pectinate. It differs from *Arsinoë* in having the palpi without pubescence, slender, the terminal segments not widening apically and not abruptly truncate. The specific name *trimaculatus* has however been used in *Lobodontus* by Chaudoir (*Bull. Soc. Nat. Moscow*, **1848** : 121). I therefore propose **Lobodontus murrayi** nom. n. for *Coptodera trimaculata* (Murr.). *Rhaphidognatha* Murr. (1857), of which *trimaculata* Murr. is the genotype, is therefore a synonym of *Lobodontus* (1842).

Idiomorphini.

The following description is based on material received from the Imperial Institute of Entomology. The holotype has been presented to the British Museum.

The genus *Idiomorphus*, to which the species to be described belongs, is that for which Andrewes (*Faun. Brit. Ind.*, Carabidae, **1** : 42, 44), created the tribe Idiomorphini, distinguished from the Harpalini by the possession of the following characters : maxillae without a hook, densely hairy on the inside to the apex; the three basal joints of the antennae glabrous; mandibles thick and rugose, with rudimentary scrobes; the head deflexed and all tibiae dilated outwardly at the apex. The tribe includes a single genus and species *Idiomorphus guerini* Chaud., occurring in India. The species described below is therefore the first of the tribe and genus to be recorded from Africa.

Idiomorphus xanthochrous sp. n. (figs. 5–8).

Length : 9–10 mm. *Colour :* reddish-testaceous, somewhat paler ventrally; mandibles reddish-brown, darker along outer edge, black at tips, along inner edges and along the dorsal carina; basal corners of clypeus black. *Head :* large and deflexed; unlike *I. guerini* Chaud. it is not noticeably inflated behind the eyes; antennae moniliform, short; mandibles striate towards the apex, thickly punctured and very slightly pubescent; the right mandible with a sharp tooth near the base on the inner side as in *I. guerini* Chaud.; labrum concave and deeply emarginate anteriorly, with numerous setae along the front edge; clypeus emarginate anteriorly exposing the basal membrane of labrum; with two long setae on each side; two deep depressions run upwards on the head from the base of the clypeus; the whole surface of the head is slightly wrinkled; a single supraorbital seta on each side near the hind margin of the eye; mouth parts as figured (figs. 6 & 7); terminal segments of labial palpi more expanded than in *I. guerini* Chaud. and the tooth of mentum is more prominent; ligula and paraglossae identical in the two species. *Prothorax :* length 2·3–2·66 mm.; width across apex and base equal, 2·1–2·5 mm.; surface slightly and uniformly wrinkled; sides equally contracted at apex and base; disc moderately convex; median line very faint. *Elytra :* length 6·0–6·6 mm.; greatest width 4·2–4·9 mm.; convex descending sharply at sides and apex; striae well marked, faintly punctured, intervals convex.

Localities. Nyasaland : Chiromo, xii.18 (*R. C. Wood*) holotype ♂. S. Rhodesia : Bulawayo; 23.xi.24. paratype in Rhodesia Museum.

INDEX

abyssinicus, Paracomacris, 218.
Achorutes rosaceus, 205.
Acromantis westwoodi, 180.
Acrydium bachofeni **sp. n.**, 158.
Acrydium subulatum, 158.
acteon, Thymelicus, 152.
acutangulus, Gastrimargus, 220.
Adopoea (see *Thymelicus*).
adriaticus, Clunio, 165.
aeneocuprea, Feronia, 3.
aenigma, Papilio paradoxa, 45.
aethiopicus, Aulacobothrus, 219.
africanus, Clunio, 165.
agenor, Papilio memnon, 47.
ajaka, Pieris melete, 48.
alamatae, Forcipomyia, 73.
albipennis, Culicoides, 112
albovenosa, Paryphanta, 82; 85.
alcandra, Symphaedra, 150.
alcathoë, Euploea, 50.
alcippe, Phalanta, 99.
Alloeorrhynchus, key to spp., 196
Alloeorrhynchus chinai **sp. n.**, 195.
Alloeorrhynchus niger, 191.
Alloeorrhynchus rubrofasciatus **sp.,n.**, 193.
Alloeorrhynchus tarsalis, 193.
alpicola, Prosopothrips, 134.
alpiniae, Promecotheca, 28.
alternans, Platypus, 14.
alticola, Ixias, 49.
alticola, Xestopus, 60.
Amantis reticulata, 178.
amoena, Pseudotettigonia, 157.
Amorphoscelis micans **sp. n.**, 177.
amplificata, Paracomacris, 217.
amplus, Pericalus, 186.
Anacridium, 158.
Anaphaeis, 151.
Anaphaeis creona, 151.
Anaxarcha limbata, 180.
andamanensis, Catascopus, 188.
anglicus, Pteronemobius, 156.
angorae, Empis (*Polyblepharis*), 136.
angulicollis, Lachnosterna, 31.
angusticeps, Thrips, 34.
angustilinea, Paryphanta, 82; 86
Anilina **gen. n.**, 80.
Anilina spp., 80
Anopheles apoci, 181.
Anopheles (*Myzomyia*) *rupicolus* **sp. n.**, 181.
anophelis, Culicoides, 114.
anu, Dodona henrici, 104.
Apanteles diatraeae, 72.
Apanteles ferrugineus, 72.
Apanteles leucaniae **sp. n.**, 69–72.
Apanteles melitaearum **sp. n.**, 65–69.
Apanteles ruficrus, 69.
Apanteles villanus, 69.
apoci, Anopheles, 181.
Aptinothrips spp., 89–91.
araucariae, Neophyllaphis, 105.
Archaegryllodes, 155.
Arctolocusta **gen. n.**, 157.
Arctolocusta grönlandica, 157.
areolatus, Neonympha, 150.
aridifolia, Tenodera, 180.
Aspidiotiphagus citrinus, 176.
Aspidiotus destructor, 176.
assamensis, Culicoides peregrinus, 113.
assamica, Gimantis, 178.
Asterolecanium morini **sp. n.**, 176.
ater, Lobodontus, 235.
Athena (see *Marpesia*).
Atrichopogon hirsutipennis, 74.
Atrichopogon stannusi, 74.
atrox, Feronia, 5.
Aulacobothrus aethiopicus, 219.
aurifer, Paralucia, 16.
australica, Mesira, 206.
authaemon, Gimantis, 178.
azarensis, Callistomimus, 21.

babaulti, Pristonychus kashmirensis, 60.
bachofeni, Acrydium, 158.
bakeri, Alloeorrhynchus, 196.
banksi, Discodon, 53.
basalis, Catascopus facialis, 188.
basiclara, Paryphanta, 82; 83.
Basitropis, 216.
beatula, Nicotikis, 30.
bellus, Catascopus, 187.
bergrothi, Alloeorrhynchus, 196.
biannulata, Forcipomyia, 73.
bicolor, Callistomimus, 19.
bimaculatus, Callistomimus, 21.
birchi, Taenaris horsfieldi, 99.
bisaltide, Doleschallia, 100.
bisecta, Paryphanta, 83; 87.
bistrigatus, Onychogomphus, 161.
bituberculata, Gratidia, 119.
biumbrata, Paryphanta, 81.
boophagus, Culicoides, 116.
borneana, Gonypeta, 178.
borneana, Theopompa, 177.
borneensis, Parastenocrobylus, 202.
borneensis, Psychomantis, 180.
brachyptera, Euprepocnemis, 223.
Brachytemnus, 55.
Brachytemnus pinipotens, 57.
Brachytemnus truncatus, 57.
brazilianus, Psephenus, 9.
brevipennis. Thisoicetrus, 222.
brevis, Silis, 53.
Bromacanthus handschini, 208.
Bronthispa limbata, 26.
Bronthispa mariana **sp. n.**, 26.
brucei, Taphoxenus, 59.
buckleyi, Culicoides, 117.

bulis, Curetis, 226.

calderasa, Lachnosterna, 31.
Callistomimus azarensis **sp. n.**, 21.
Callistomimus bicolor **sp. n.**, 19.
Callistomimus bimaculatus **sp. n.**, 21.
Callistomimus convexicollis **sp. n.**, 23.
Callistomimus depressus **sp. n.**, 21.
Callistomimus dollmani **sp. n.**, 17.
Callistomimus gratus, 20.
Callistomimus gratus marginatus **var. n.**, 24.
Callistomimus latefasciatus **sp. n.**, 18.
Callistomimus quinquemaculatus, 25.
Callistomimus rufiventris **sp. n.**, 25.
Callistomimus rugosus **sp. n.**, 22.
Callistomimus tumidipes **sp. n.**, 17.
calolepis, Mesira, 205.
cama, Parathyma, 102.
campania, Feronia, 3.
Campsomeris spp., 91–96; key to spp., 92–94.
Candezea (see *Monolepta*).
capito, Conocephalites, 157.
cardoni, Parathyma cama, 102.
carpentieri, Geinitzia, 154.
Catantops impotens **sp. n.**, 220.
Catantops lobipennis, 222.
Catascopus, key to spp., 187–189.
Catascopus illustris **sp. n.**, 189.
Catascopus jenkinsi **sp. n.**, 190.
Catopsilia spp., 50.
centralis, Paracomacris, 217.
centromaculata, Monolepta, 160.
cephalotes, Stenoscelis, 56.
Cepora lea talboti **subsp. n.**, 48.
Cepora nerissa daphna, 48.
Ceratocrania macra, 181.
Cercothrips modestus **sp. n.**, 132–134
championi, Feronia, 3.
chaon, Papilio, 46.
Charaxes durnfordi, 104.
Charaxes jahlusa ganalensis **subsp. n.**, 64.
cheesmani, Lepidocyrtoides, 207.
cheesmani, Paronella, 207.
chinai, Alloeorrhynchus (*Psilistus*), 195.
chopardi, Eneopterotrypus, 156.
Chrysophanus discifer, 16.
cingalensis, Catascopus, 188.
Cirrochroa malaya, 100.
citrinus, Aspidiotiphagus, 176.
Cleoporus ribbei, 213.
Cleoporus salomonensis **sp. n.**, 213.
Clunio africanus **sp. n.**, 165.
Clunio spp., 165.
cnesipus, Sphodropsis, 63.
coerulescens, Coloracris, 203.
collaris, Lachnosterna, 33.
Coloracris coerulescens, 203.
Coloracris rubescens **sp. n.**, 203.
Conocephalites capito, 157.
convexicollis, Callistomimus, 23.
Coptodera trimaculata, 236.
Coptus, 55.
corallinus, Alloeorrhynchus (*Psilistus*), 196.
corbeti, Enispe euthymius, 99.
cordiger, Culicoides, 112.
coronatus, Hymenopus, 181.
cortensis, Hydroptila, 121.
Cosmorhyssa fasciata, 219.
couloniana, Heteropternis, 220.
crameri, Euploea, 51.
creona, Anaphaeis, 151.
crocale, Catopsilia, 50.
Crossotarsus erichsoni, 14.
Crossotarsus falsificus, 15.
Crossotarsus fuscipilosus, 14.
Crossotarsus nairobiensis **sp. n.**, 15.
Crossotarsus rhodesianus **sp. n.**, 14.
Crossotarsus spatiosus, 15.
Crossotarsus togatus **sp. n.**, 15.
Ctenolepisma longicaudata, 208.
Culicoides, key to Malayan spp., 112–113.
Culicoides anophelis flavescens **var. n.**, 114.
Culicoides boophagus **sp. n.**, 116.
Culicoides buckleyi **sp. n.**, 117.
Culicoides flumineus **sp. n.**, 116.
Culicoides spp., 75; 76; 114–115.
cupricollis, Catascopus fuscoaeneus, 189.
Curetis, 226–233; key to spp., 225–226.
Curetis santana gabrieli **subsp. n.**, 229.
Curetis saronis sumatrana **subsp. n.**, 231.
curta, Eurytoma, 123.
curtisi, Papilio iswaroides, 47.
cyanea, Damelia, 212.
cyanellus, Catascopus, 188.
cyanimus, Torymus, 127.
Cyrtacanthacris, 158.

Dacus masaicus **sp. n.**, 42.
Dacus pleuralis, 43.
Dacus sphaeristicus, 41.
Dacus taurus **sp. n.**, 43.
dahlii, Paronella, 207.
dahlii, Pseudachorutes, 205.
daleki, Culicoides, 114.
damascena, Empis (*Polyblepharis*), 136.
Damelia, key to spp., 211.
Damelia cyanea **sp. n.**, 212.
Damelia leveri **sp. n.**, 211.
Damelia marshalli, 211.
Damelia metallica **sp. n.**, 211.
Damelia salomonensis **sp. n.**, 211.
daphna, Cepora nerissa, 48.
Dasiosoma **gen. n.**, 233.
Dasiosoma testaceum **sp. n.**, 234.
Dasyhelea dehalperti **sp. n.**, 76.
Dasyhelea waldiae **sp. n.**, 77.
Dasyhelea spp., 76–78.
dehalperti, Dasyhelea, 76.
Demetrias, 235.
demoditas, Eurema, 152.
demonica, Hypanartia, 150.
depressus, Callistomimus, 21.
Deroplatys moultoni, 179.
Deroplatys shelfordi, 179.
Deroplatys truncata, 180.
destructor, Aspidiotus, 176.
diatraeae, Apanteles, 72.
Dihammus inaequalis **sp. n.**, 8.
discifer, Chrysophanus, 16.
Discodon banksi **sp. n.**, 53.
Discodon moultoni, 53.
distanti, Euploea, 51.
distinctus, Pericalus, 186.
Dodona egeon, 104.
Dodona henrici anu **subsp. n.**, 104.
dohrni, Campsomeris, 95.
dolens, Feronia, 3.
Doleschallia bisaltide pratipa, 100.

Dolichotelus, 58.
dollmani, Callistomimus, 17.
dorelia, Neptis heliodore, 101.
doson, Papilio, 47.
Drosophila gibbinsi **sp. n.**, 169; larva and pupa of, 170–172.
Dryocoetes, 14.
Dubitacris **gen. n.**, 197.
Dubitacris robustus **sp. n.**, 199.
durnfordi, Charaxes, 104.
dusuntua, Herona sumatrana, 103.
dyaki, Hierodula, 180.

egeon, Dodona, 104.
eichoffi, Xyleborus, 13.
elegans, Aptinothrips, 90.
elegans, Catascopus, 189.
eleuchea, Marpesia, 151.
elgonensis, Paracomacris, 218.
Elymnias, 98.
Elymnias hypermnestra nimota **subsp. n.**, 97.
Elymnias hypermnestra tinctoria, 97.
Elymnias kamara erinyes, 98.
Elymnias malelas saueri, 97.
Empis insulata **sp. n.**, 143.
Empis nigropilosa **sp. n.**, 142.
Empis sp., 144.
Empis (*Pachymeria*) *spiralis* **sp. n.**, 140.
Empis (*Polyblepharis*) *angorae* **sp. n.**, 136.
Empis (*Polyblepharis*) *damascena* **sp. n.**, 136.
Empis (*Polyblepharis*) *haemorrhoica*, 135.
Empis (*Polyblepharis*) *heliciphora* **sp. n.**, 139.
Empis (*Polyblepharis*) *soror* **sp. n.**, 138.
Empis (*Polyblepharis*) *syriaca* **sp. n.**, 137.
Endaëus, 58.
Eneoptera, 156.
Eneopterotrypus **gen. n.**, 156.
Eneopterotrypus chopardi **sp. n.**, 156.
Enispe euthymius corbeti, 99.
Entomobrya proxima, 205.
Entomobrya varia, 205.
erebus, Papilio nox, 47.
Eremotes, 55.
Ergolis specularia, 99.
erichsoni, Crossotarsus, 14.
Erineophilus guyanaensis **sp. n.**, 13.
erinyes, Elymnias kamara, 98.
Euchomenella heteroptera, 179.
Eucorynus, 216.
Euploea alcathoë gardineri, 50.
Euploea crameri, 51.
Euploea distanti, 51.
Euploea evalida, 50.
Euploea moorei, 51.
Euploea moorei tiomana **subsp. n.**, 51.
Euploea ochsenheimeri, 51.
Euprepocnemis keniensis **nom. n.**, 223.
Euprepocnemis montigena **sp. n.**, 222.
Euprepocnemis spp., 223.
Euptychia, 150.
Euptychia herse, 150.
Euptychia lydia, 150.
Euptychia mollina, 150.
Eurema, 152.
Eurema demoditas, 152.
Eurytoma curta, 123–126.
Eurytoma robusta, 126–127.
Euthalia, 103.
Euthalia kanda marana **subsp. n.**, 103.
euthymius, Enispe, 99.
evalida, Euploea, 50.
exocha, Feronia, 3.
extenuata, Paryphanta, 83, 84.

facialis, Catascopus, 188.
falsificus, Crossotarsus, 15.
fasciata, Cosmorhyssa, 219.
fasciatus, Lepidocyrtoides cheesmani, 207.
fascinator, Pericalus, 185.
felderi, Curetis, 232.
Feronia, key to spp., 1–6.
Feronia atrox **sp. n.**, 5.
Feronia campania **sp. n.**, 3.
Feronia lidara **sp. n.**, 6.
Feronia poecilma **sp. n.**, 5.
Feronia styx **sp. n.**, 4.
ferrugineus, Apanteles, 72.
fidelis, Hemidoecus, 107.
fimbriata, Paryphanta, 83; 87.
Fissocantharis moorei **sp. n.**, 52.
flava, Dasyhelea, 76.
flava, Xanthomantis, 178.
flavescens, Culicoides, 114.
flavicornis, Platypus, 14.
flavipennis, Panesthia, 7.
flavipes, Gastrimargus acutangulus, 220.
floridus, Sintor, 214.
flumineus, Culicoides, 116.
Forcipomyia alamatae **sp. n.**, 73.
Forcipomyia inornatipennis, 112.
Forcipomyia spp., 73.
foveicollis, Lachnosterna, 31.
francisca, Mycalesis, 149.
freeborni, Lachnosterna, 32.
fulvithorax, Culicoides, 113.
fuscipilosus, Crossotarsus, 14.
fuscoaeneus, Catascopus, 189.
fuscus, Papilio, 47.

gabrieli, Curetis santana, 229.
gagates, Feronia, 2.
ganalensis, Charaxes jahlusa, 64.
gardineri, Euploea alcathoë, 50.
Gastrimargus acutangulus flavipes **subsp. n.**, 220.
gedensis, Stenoscelis, 56.
Geinitzia carpentieri **sp. n.**, 154.
GEINITZIINAE **subfam. n.**, 155.
gemellus, Culicoides, 113.
gemma, Neonympha, 150.
gentilis, Culicoides, 113.
ghentata, Lachnosterna, 33.
gibbinsi, Drosophila, 169–172.
Gimantis assamica, 178.
Gimantis authaemon, 178.
Gimantis insularis **sp. n.**, 178.
Glycestha (see *Anaphaeis*).
Gonypeta borneana, 178.
gossypii, Menius, 159.
gracilicollis, Hierodula, 180.
gracilitarsis, Stenoscelis, 56.
grandis, Protogryllus, 155.
Gratidia bituberculata, 119.
Gratidia spinulosa, 120.
Gratidia uvaroviana **sp. n.**, 119.
gratus, Callistomimus, 20; 24.
greeni, Pedronia, 173.
griseofasciata, Trichodesma, 53.

grönlandica, Arctolocusta, 157.
gryllacroides, Jurassoblatta, 154.
Gryllotalpa, 157.
Gryllus schindewolfi **sp. n.**, 156.
Gryporrhynchus, 58.
guadala, Promecotheca, 28.
guerini, Idiomorphus, 237.
guttifer, Culicoides, 112.
guyanaensis, Erineophilus, 13.
Gymnobothroides hemipterus, 219.
Gymnobothroides keniensis **sp. n.**, 218.
gymnopterus, Culicoides, 113.

Haania intermedia, 179.
Habrocytes trypetae, 129–130.
haemorrhoica, Empis (*Polyblepharis*), 135.
Haetera, 152.
Haetera piera, 152.
Halirytus, 165.
handschini, Bromacanthus, 208.
Hapalopeza nitens, 178.
hardwicki, Catascopus, 189.
harita, Neptis, 101.
harmandi, Feronia, 3.
hedonia, Precis, 100.
Heeracris **gen. n.**, 159.
Heeracris oeningensis, 159.
heliciphora, Empis (*Polyblepharis*), 139.
heliodore, Neptis, 101.
Hemiodoecus fidelis **sp. n.**, 107–110.
hemipterus, Gymnobothroides, 219.
henrici, Dodona, 104.
hera, Curetis, 231.
Herona sumatrana dusuntua **subsp. n.**, 103.
herse, Euptychia, 150.
Hesperia lucanus, 16.
Hestiasula phyllopus, 181.
heteroptera, Euchomenella, 179.
Heteropternis couloniana, 220.
Heterotrypus, 156.
Hierodula spp., 180.
Hilara kervillei **sp. n.**, 145.
Hilara megalochira **sp. n.**, 146.
Hilara sp., 148.
himalayensis, Stenoscelis, 56.
hirsutipennis, Atrichopogon, 74.
hobbyi, Nicotikis, 29.
hobbyi, Silis, 53.
Hoplandothrips ugandensis **sp. n.**, 131.
horsfieldi, Taenaris, 99.
Hydrodromia stagnalis, 148.
Hydroptila cortensis **sp. n.**, 121.
Hydroptila tigurina, 121.
Hymenopus coronatus, 181.
Hypanartia, 150.
Hypanartia demonica, 150.
hypermnestra, Elymnias, 97.

ibandana, Euprepocnemis, 223.
Idiomorphus guerini, 237.
Idiomorphus xanthocrous **sp. n.**, 237.
illustris, Catascopus, 189.
impotens, Catantops, 220.
inaequalis, Dihammus, 8.
incisa, Paryphanta, 81; 84.
incubans, Pterobosca, 111.
indica, Feronia, 2.
indus, Sphodrus, 59.
ingrami, Forcipomyia, 73.
inornatipennis, Culicoides, 75.
inornatipennis, Forcipomyia, 112.
insignis, Salina, 207.
insularis, Curetis, 229.
insularis, Gimantis, 178.
insulata, Empis, 143.
intacta, Paryphanta, 82; 84.
intermedia, Haania, 179.
irenae, Tanaecia pelea, 102.
iswaroides, Papilio, 47.
Ixias alticola, 49.
Ixias ludekingi, 49.
Ixias pyrene, 49.
Ixias verna, 49.

jacobsoni, Culicoides, 113.
jacobsoni, Sira, 205.
jacobsoni, Meinertellus, 208.
jahlusa, Charaxes, 64.
javanica, Panesthia, 7.
javanicus, Machilontus, 209.
jelepa, Feronia, 2.
jenkinsi, Catascopus, 190.
jopa, Curetis hera, 231.
Jurassobatea **gen. n.**, 154.
Jurassobatea gryllacroides **sp. n.**, 154.

kajanga, Papilio doson, 47.
kamara, Elymnias, 98.
kanda, Euthalia, 103.
karnyi, Aptinothrips, 90.
kashmirensis, Pristonychus, 60.
keniensis, Euprepocnemis, 223.
keniensis, Gymnobothroides, 218.
keniensis, Parasphena, 220.
kervillei, Hilara, 145.
khasia, Mycalesis visala, 96.
kingi, Culicoides, 75.
klossi, Culicoides, 113.

Lachnocnema, 235.
Lachnosterna angulicollis, 31.
Lachnosterna collaris, 33.
Lachnosterna foveicollis, 31.
Lachnosterna freeborni **sp. n.**, 32.
Lachnosterna ghentata **sp. n.**, 33.
Lachnosterna lanepta **sp. n.**, 31.
Lachnosterna magnicornis, 33.
Lachnosterna nisuens **sp. n.**, 32.
Lachnosterna pallidicornis, 32.
Lachnosterna pilosula, 32.
Lachnosterna plairi **sp. n.**, 31.
Lachnosterna rufotestacea, 32.
Lachnosterna (*Phytalus*) *calderasa* **sp. n.**, 31.
lanceloti, Stilobezzia, 78.
lanepta, Lachnosterna, 31.
larnaudiei, Nicotikis, 30.
Lasiohelea lefanui, 118.
Lasiohelea lefanui squamipes, 118.
lasionota, Forcipomyia, 73.
latefasciatus, Callistomimus, 18.
latifascia, Paryphanta, 82; 86.
lea, Cepora, 48.
Lebadea martha malayana, 102.
lefanui, Lasiohelea, 118.
Lepidocyrtoides cheesmani **sp. n.**, 207.
Lepidocyrtoides cheesmani fasciatus **var. n.**, 207.
Lepidocyrtoides parvidentatus, 206.

Lepidocyrtoides striatus, 206.
Lepidosaphes vermiculus **sp. n.**, 174.
lepidota, Forcipomyia, 73.
Leptomantis sumatrana, 179.
leucaniae, Apanteles, 69–72.
leucophthalmus, Sphodrus, 59.
leveri, Damelia, 211.
leveri, Nesohaltica, 213.
leveri, Promecotheca, 27.
levicula, Feronia, 3.
lidara, Feronia, 6.
limbaria, Lucia, 16.
limbata, Anaxarcha, 180.
limbata, Bronthispa, 26.
lissonotus, Catascopus, 188.
lobipennis, Catantops, 222.
Lobodontus ater **sp. n.**, 235.
Lobodontus murrayi **nom. n.**, 236.
longicaudata, Ctenolepisma, 208.
longifolia, Stenoscelis, 56.
lucanus, Hesperia, 16.
Lucia, limbaria, 16.
ludekingi, Ixias, 49.
luteo-alata, Panesthia, 7.
lydia, Euptychia, 150.

Machilontus javanicus, 209.
macilentus, Parastenocrobylus, 201.
Maciloides novae-guinae **sp. n.**, 209.
macra, Ceratocrania, 181.
maculata, Paryphanta, 82.
maculata, Statilia, 180.
maculipennis, Culicoides, 113.
magnicornis, Lachnosterna, 33.
magnus, Protogryllus, 155.
Majangella moultoni, 179.
malaya, Cirrochroa, 100.
malayana, Lebadea martha, 102.
malayica, Curetis bulis, 226.
malelas, Elymnias, 97.
mandarinea, Panesthia, 7.
manipularis, Platypus, 14.
marana, Euthalia kanda, 103..
mareoticus, Thrips, 34.
marginalis, Alloeorrhynchus (*Psilistus*), 196.
marginatus, Callistomimus gratus, 24.
mariana, Bronthispa, 26.
marinus, Clunio, 165.
Marpesia, 151.
Marpesia eleuchea, 151.
martha, Lebadea, 102.
masaicus, Dacus, 42.
megalochira, Hilara, 146.
Meinertellus jacobsoni, 208.
melete, Pieris, 48.
melitaearum, Apanteles, 65–69.
memnon, Papilio, 47.
Menius gossypii **sp. n.**, 159.
Mesira australica, 206.
Mesira calolepis, 205.
Mesira picta, 206.
Mesogryllus, 155.
metallica, Damelia, 212.
m-flavum, Onychogomphus, 162; 163.
micans, Amorphoscelis, 177.
micans, Odontomantis, 180.
milnei, Culicoides, 75.
Miorrhinus, 55.
mirabilis, Catascopus, 187.
mirandula, Miromantis, 178.
Miromantis mirandula, 178.
modestus, Cercothrips, 132.
modigliani, Panesthia, 7.
mollina, Euptychia, 150.
Monolepta centromaculata, 160.
Monolepta (*Candezea*) *pruni* **sp. n.**, 160.
montigena, Euprepocnemis, 222.
moorei, Euploea, 51.
moorei, Fissocantharis, 52.
morini, Asterolecanium, 176.
morio, Phloeophagosoma, 55.
moultoni, Deroplatys, 179.
moultoni, Discodon, 53.
moultoni, Majangella, 179.
muricatus, Stenoscelis, 56.
muriceus, Stenoscelis, 56.
murrayi, Lobodontus, 236.
Mycalesis, 149.
Mycalesis francisca, 149.
Mycalesis otrea, 149.
Mycalesis visala khasia, 96.
Myzomyia (see *Anopheles*).

nairobiensis, Crossotarsus, 15.
Nemozoma, 58.
Neocurtilla schmidtgeni **sp. n.**, 156.
Neonympha spp., 150.
Neophyllaphis araucariae **sp. n.**, 105.
Neophyllaphis podocarpi, 106.
Neptis harita, 101.
Neptis heliodore direlia, 101.
Neptis vikasi omeroda, 101.
Neptis yerburii pendleburyi **subsp. n.**, 101.
nerissa, Cepora, 48.
Nesohaltica leveri **sp. n.**, 213.
Nesohaltica nigra, 214.
Nicotikis beatula, 30.
Nicotikis hobbyi **sp. n.**, 29.
Nicotikis larnaudiei, 30.
Nicotikis ovulum, 30.
Nicotikis pagana, 30.
Nicotikis sauteri, 30.
niger, Alloeorrhynchus (*Psilistus*), 191.
nigra, Nesohaltica, 214.
nigricans, Dasyhelea, 76.
nigromaculata, Trichodesma, 53.
nigropilosa, Empis, 142.
nimota, Elymnias hypermnestra, 97.
nisuens, Lachnosterna, 32.
nitens, Culicoides, 112.
nitens, Hapalopeza, 178.
Nomadacris, 158.
novae-caledoniae, Trinemura, 208.
novae-guinae, Machiloides, 209.
nowitzkii, Feronia, 3.
nox, Papilio, 47.

ochsenheimeri, Euploea, 51.
ocularis, Theopompula, 177.
Odontomantis micans, 180.
Odontomantis rhyssa, 180.
Odontomelus pallidus, 217.
oeningensis, Heeracris, 159.
oligocaenica, Proschistocerca, 158.
omeroda, Neptis vikasi, 101.
Onychogomphus bistrigatus, 161.
Onychogomphus m-flavum, 162; 163.
Onychogomphus schmidti **sp. n.**, 163.

Opharus, 197.
orbata, Paryphanta, 81.
Oreas (see *Haetera*).
orientalis, Culicoides, 115.
ornatus, Pericalus, 186.
Ornithacris, 158.
otrea, Mycalesis, 149.
ovulum, Nicotikis, 30.
oxystoma, Culicoides, 113.

pacificus, Clunio, 165.
pagana, Nicotikis, 30.
PALAEOREHNIINAE **subfam. n.**, 154.
pallidicornis, Lachnosterna, 32.
pallidus, Odontomelus, 217.
Panesthia luteo-alata **sp. n.**, 7.
Panesthia spp., 7–8.
Papilio chaon raya **subsp. n.**, 46.
Papilio doson kajanga **subsp. n.**, 47.
Papilio spp., 45–47.
papuana, Promecotheca, 28.
papuanus, Pseudoparonella, 208.
Paracomacris amplificata **sp. n.**, 217.
Paracomacris centralis, 217.
Paracomacris spp., 218.
paradoxa, Papilio, 45.
parallelus, Protogryllus, 155.
Paralucia aurifer, 16.
Parasphena keniensis, 220.
Parastenocrobylus borneensis, 202.
Parastenocrobylus maculentus **sp. n.**, 201.
Parathyma cama cardoni **subsp. n.**, 102.
Paronella cheesmani **sp. n.**, 207.
Paronella dahlii, 207.
Paronella dahlii tamarensis, 207.
parvidentatus, Lepidocyrtus, 206.
Paryphanta, key to spp., 81–83.
Paryphanta angustilinea **sp. n.**, 86.
Paryphanta extenuata **sp. n.**, 84.
Paryphanta incisa **sp. n.**, 84.
Paryphanta latifascia **sp. n.**, 86.
Paryphanta pseudobisecta **sp. n.**, 84.
Paryphanta rectifascia **sp. n.**, 86.
Paryphanta rectilinea **sp. n.**, 85.
Paryphanta similis **sp. n.**, 85.
Paryphanta tamsi **sp. n.**, 85.
Paryphanta tenuifascia **sp. n.**, 85.
Paryphanta ugandensis **sp. n.**, 87.
Pedronia, 173.
Pedronia greeni **sp. n.**, 173.
Pedronia strobilanthis, 173.
pelea, Tanaecia, 102.
pendleburyi, Neptis yerburii, 101.
penrissensis, Panesthia, 8.
peregrinus, Culicoides, 113.
Pericalus, key to spp., 185.
Pericalus amplus **sp. n.**, 186.
Pericalus distinctus, 186.
Pericalus fascinator **sp. n.**, 185.
Pericalus formosanus, 186.
personata, Anilina, 80.
Phalanta alcippe tiomana **subsp. n.**, 99.
philomela, Ypthima, 149.
Phloeophagosoma, 55.
Phloeophagosoma morio, 55.
Phloeophagus, 55.
phyllopus, Hestiasula, 181.
physignathus, Sphodropsis, 62.
Phytalus (see *Lachnosterna*).
picta, Mesira, 206.
piera, Haetera, 152.
Pieris melete ajaka, 48.
pilosula, Lachnosterna, 32.
pinipotens, Brachytemnus, 57.
pithecolobius, Xyleborus, 13.
plagiata, Panesthia, 7.
plairi, Lachnosterna, 31.
Platypus alternans, 14.
Platypus flavicornis, 14.
Platypus manipularis **sp. n.**, 14.
Platypus varius (see *Crossotarsus erichsoni*).
plaumanni, Psephenus, 11.
plebeia, Anilina, 80.
pleuralis, Dacus, 43.
podocarpi, Neophyllaphis, 106.
poecilma, Feronia, 5.
Polyblepharis (see *Empis*).
polytes, Papilio, 47.
pomona, Catopsilia, 50.
pratipa, Doleschallia bisaltide, 100.
Precis hedonia seitzi **subsp. n.**, 100.
prexaspis, Papilio fuscus, 47.
Pristonychus, key to spp., 60.
Pristonychus subglaber **sp. n.**, 61.
Pristonychus tenuis **sp. n.**, 61.
Promecotheca leveri **sp. n.**, 27.
Promecotheca salomonica **sp. n.**, 28.
Promecotheca spp., 27–28.
Proschistocerca **gen. n.**, 158.
Proschistocerca oligocaenica **sp. n.**, 158.
Prosopothrips alpicola **sp. n.**, 134.
PROTOGRYLLINAE **subfam. n.**, 155.
Protogryllus **gen. n.**, 155.
Protogryllus grandis **sp. n.**, 155.
Protogryllus magnus **sp. n.**, 155.
Protogryllus parallelus **sp. n.**, 155.
proxima, Entomobrya, 205.
pruni, Monolepta (*Candezea*), 160.
Psephenus brazilianus **sp. n.**, 9.
Psephenus plaumanni **sp. n.**, 11.
Pseudachorutes dahlii, 205.
pseudobisecta, Paryphanta, 81; 84.
pseudoinsularis, Curetis insularis, 229.
Pseudoparonella papuanus **sp. n.**, 208.
Pseudotettigonia **gen. n.**, 157.
Pseudotettigonia amoena, 157.
Psilistus (see *Alloeorrhynchus*).
Psychomantis borneensis, 180.
Pterobosca incubans **sp. n.**, 111.
Pteronemobius anglicus **sp. n.**, 156.
ptychospermae, Promecotheca, 27.
pulicaris, Culicoides, 76.
pungens, Culicoides, 115.
pyranthe, Catopsilia, 50.
pyrene, Ixias, 49.

quadriguttulata, Campsomeris, 94.
quinquemaculata, Callistomimus, 25.

raripalpis, Culicoides, 115.
raya, Papilio chaon, 46.
rectifascia, Paryphanta, 83; 86.
rectilinea, Paryphanta, 82; 85.
reductus, Catascopus cyanellus, 188.
regalis, Catascopus, 187.
regalis, Panesthia, 7.
reticulata, Amantis, 178.
Rhaphidognatha (see *Lobodontus*).

rhodesianus, Crossotarsus, 14.
Rhyncolus, 55.
rhyssa, Odontomantis, 180.
ribbei, Cleoporus, 213.
robusta, Eurytoma, 126.
robustus, Dubitacris, 199.
romulus, Papilio polytes, 47.
rosaceus, Achorutes, 205.
rubescens, Coloracris, 203.
rubrofasciatus, Alloeorrhynchus (*Psilistus*), 193.
rufibasalis, Paryphanta, 81; 83.
ruficrus, Apanteles, 69.
rufilinea, Paryphanta, 81; 84.
rufiventris, Callistomimus, 25.
rufotestacea, Lachnosterna, 32.
rufus, Aptinothrips, 89.
rugosus, Callistomimus, 22.
rupicolus, Anopheles (*Myzomyia*), 181.
ruptus, Stenoscelis, 56.

Salganea, 7.
Salina insignis, 207.
salomonensis, Cleoporus, 213.
salomonensis, Damelia, 211.
salomonina, Promecotheca, 28.
salvazae, Catascopus, 188.
santana, Curetis, 229.
saronis, Curetis, 231.
saturnus, Papilio, 46.
saueri, Elymnias malelas, 97.
sauteri, Nicotikis, 30.
schindewolfi, Gryllus, 156.
Schistocerca, 158.
schmidtgeni, Neocurtilla, 156.
schmidti, Onychogomphus, 163.
scintillans, Catascopus elegans, 189.
seitzi, Precis hedonia, 100.
sellatocollis, Stenoscelis, 58.
separata, Paryphanta, 83; 87.
setoensis, Clunio, 165.
setosus Stenoscelis, 57.
seydeli, Paryphanta, 81.
shelfordi, Deroplatys, 179.
shortii, Culicoides, 115.
Silis brevis, 53.
Silis hobbyi **sp. n.**, 53.
similis, Paryphanta, 81; 85.
sintana, Feronia, 3.
Sintor floridus, 214–216.
Sira jacobsoni, 205.
smaragdulus, Catascopus, 188.
soror, Empis (*Polyblepharis*), 138.
spatiosus, Crossotarsus, 15.
specularia, Ergolis, 99.
sperthis, Curetis, 226.
sphaeristicus, Dacus, 41.
Sphodropsis, 59; key to spp., 62.
Sphodropsis cnesipus **sp. n.**, 63.
Sphodropsis physignathus **sp. n.**, 62.
Sphodrus indus, 59.
Sphodrus leucophthalmus, 59.
spinifer, Pristonychus, 60.
spinulosa, Gratidia, 120.
spiralis, Empis (*Pachymeria*), 140.
squamipes, Lasiohelea lefanui, 118.
stannusi, Atrichopogon, 74.
Statilia maculata, 180.
Stenoscelis, key to spp., 56.
Stenoscelis sellatocollis **sp. n.**, 58.
Stenoscelis setosus **sp. n.**, 57.
Stenoscelis strigicollis **sp. n.**, 57.
Stenothrips, 39.
Stereoderus, 55.
Stilobezzia lanceloti **sp. n.**, 78.
striatus, Lepidocyrtoides, 206.
strigicollis, Stenoscelis, 57.
strobilanthis, Pedronia, 173.
stylifer, Aptinothrips, 90.
styx, Feronia, 4.
subasperatus, Stenoscelis, 56.
subglaber, Pristonychus, 61.
submuricatus, Stenoscelis, 56.
subulatum, Acrydium, 158.
sumatrae, Culicoides, 113.
sumatrana, Curetis saronis, 231.
sumatrana, Herona, 103.
sumatrana, Leptomantis, 179.
Symphaedra, 150.
Symphaedra alcandra, 150.
syriaca, Empis (*Polyblepharis*), 137.

tabaci, Thrips, 34.
Taenaris horsfieldi birchi, 99.
tagalica, Curetis, 232.
tagalina, Curetis tagalica, 232.
talboti, Cepora lea, 48.
tamarensis, Paronella dahlii, 207.
tamsi, Paryphanta, 81; 85.
Tanaecia pelea irenae **subsp. n.**, 102.
Taphoxenus, 59.
Taphoxenus brucei, 59.
tarsalis, Alloeorrhynchus (*Psilistus*), 193.
taurus, Dacus, 43.
Telmatogeton, 165.
tenera, Tropidomantis, 178.
Tenodera, aridifolia, 180.
tenuifascia, Paryphanta, 82; 85.
tenuis, Pristonychus, 61.
Terias (see *Eurema*).
tessmani, Anilina, 80.
testaceum, Dasiosoma, 234.
Tettigonia, 157.
Thalassomyia, 165.
Theopompa borneana, 177.
Theopompula ocularis, 177.
thetis, Curetis, 231.
Thisoicetrus brevipennis, 222.
Thrips spp., 34.
Thymelicus acteon, 152.
tigurina, Hydroptilia, 121.
tinctoria, Elymnias hypermnestra, 97.
tiomana, Euploea moorei, 51.
tiomana, Phalanta alcippe, 99.
togatus, Crossotarsus, 15.
Togeza, 58.
Torymus cyanimus, 127–129.
transversa, Panesthia, 7.
Trichodesma griseofasciata **sp. n.**, 53.
Trichodesma nigromaculata, 53.
trimaculata, Coptodera, 236.
Trinemura novae-caledoniae, 208.
tropicus, Xyleborus, 13.
Tropidomantis tenera, 178.
truncata, Deroplatys, 180.
truncatus, Brachytemnus, 57.
trypetae, Habrocytus, 129.
tsushimensis, Clunio, 165.
tumidipes, Callistomimus, 17.

ugandensis, Hoplandothrips, 131.
ugandensis, Paryphanta, 83; 87.
uvaroviana, Gratidia, 119.

varia, Entomobrya, 205.
varius, Platypus (see *Crossotarsus erichsoni*).
vermiculus, Lepidosaphes, 174.
verna, Ixias, 49.
vikasi, Neptis, 101.
violacea, Promecotheca, 28.
violaceus, Catascopus, 188.
visala, Mycalesis, 96.

waldiae, Dasyhelea, 77.
westwoodi, Acromantis, 180.
whithilli, Catascopus, 188.

xanthocrous, Idiomorphus, 237.
Xanthomantis flava, 178.
Xenomimetes, 55.
Xestopus **gen. n.**, 59; 60.
Xestopus alticola, 60.
Xyleborus eichoffi, 13.
Xyleborus pithecolobius **sp. n.**, 13.
Xyleborus tropicus, 13.

yerburii, Neptis, 101.
Ypthima, 149.
Ypthima philomela, 149.

ERRATA.

p. 51, line 15 from bottom, for "*singhapura*" read "*singapura.*"
p. 99, line 1, for "*Tanaeris*" read "*Taenaris.*"